DESCRIBING THE COLLEGE CHOICE PROCESS OF TRADITIONAL AGED STUDENTS AT WASHBURN INSTITUTE OF TECHNOLOGY

By

Kirk R. Haskins
M.B.A., Wichita State University, 1999
B.A., Washburn University, 1993

Submitted to the graduate degree program in the Educational Leadership and Policy Studies department and the Graduate Faculty of the University of Kansas in partial fulfillment of the requirements for the degree of Doctor of Education.

Chair: Dr. Lisa Wolf-Wendel

Dr. Susan Twombly

Dr. Marlesa Roney

Dr. Eugene Parker

Dr. Kelli Thomas

Date Defended: 5 December, 2018

The Dissertation Committee for Kirk R. Haskins certifies

that this is the approved version of the following dissertation:

Chair: Dr. Lisa Wolf-Wendel

Date approved: 13 December, 2018

ABSTRACT

Selecting a college is a significant and complicated decision for students. The purpose of this study is to describe the college choice process of traditional aged students at Washburn Institute of Technology (Washburn Tech), Topeka, KS. This study pertains to a Spring 2018 cohort of part-time and full-time Washburn Tech students, who completed their secondary education between 2013 and 2017. A forty-six-question, descriptive survey was developed to assess the targeted population's college aspirations, search methods, and choice process. Seventy-one of the 295 potential Washburn Tech students participated.

Kansas Career Technical Education institutions have become a viable postsecondary option for students. There is a lack of existing research concerning Kansas high school students' selection of sub-baccalaureate programs. Identifying why these specific Kansas students have become interested in Washburn Tech will fill a void in the college choice literature.

This study's theoretical framework is based on Hossler and Gallagher's 1987 three-stage college choice model. By acquiring accurate, systematic data from a descriptive survey, an assessment of Washburn Tech students' college aspirations, search methods, and choice process is illustrated. This study provides a foundational description of Washburn Tech students' college-choice process, revealing patterns and connections for assessing needs, and identifying areas for further research.

Survey findings concluded that the sample, representing a quarter of Washburn Tech's traditional aged students, followed the same college choice process as any other traditional aged college student, supporting and complementing existing literature. The study describes a sample of students who decided before high school that securing their future required a viable postsecondary technical education. Results support research that technical institutions are

appealing to low-income students. New discoveries were made, including that survey participants identified themselves as being motivated to succeed both inside and outside the classroom. This was supported by the discovery that participants considered an institution's job-placement and academic reputation important influences on selecting Washburn Institute of Technology.

This descriptive college choice study successfully satisfies a small piece in the large puzzle of understanding the CTE student's college choice process. Data analysis revealed several beneficial implications. The study's conclusions can potentially aid prospective students in making their own college choice, it can assist Washburn Tech in meeting stakeholders' expectations, and act as catalyst for future researchers in further understanding the CTE student's post-secondary decision journey. Finally, this study advances Washburn Tech's efforts to adopt a timely, responsive retention plan, placing in the foreground their students' needs and expectations.

ACKNOWLEDGEMENTS

Completing my doctoral dissertation has required unbelievable support from unbelievable people. It is a pleasure to acknowledge several of these instrumental individuals.

First, I am indebted to my advisor and dissertation chairperson, Dr. Lisa Wolf-Wendel, for her exceptional patience and tutelage throughout my entire doctoral program. Without her help, and advice, this research and dissertation would not have happened. Special appreciation also goes to my dissertation committee members, Dr. Susan Twombly, Dr. Marlesa Roney, Dr. Eugene Parker, and Dr. Kelli Thomas, for their expertise, time, and encouragement.

This descriptive study would not have been possible without the generous support of Washburn Institute of Technology. I am extremely grateful to Dr. Clayton Tatro, Washburn Tech's Associate Dean of Instruction, for his incredible assistance. Also, a gigantic thank you to all the amazing Washburn Tech students who participated in this study.

I leaned on countless friends during this journey. If it wasn't for the encouragement of Dr. Gary Schmidt and Dr. Michael Stoica, I would never had started a doctorate program. Mr. Seth Coulter and Ms. Ellen Fisher were fantastic in giving their time to review and edit my numerous drafts. No friend believed in me more than Mr. Steve Reed. Sadly, because he is no longer with us, this dissertation is offered in his memory.

I cannot overstate the role my loved ones had in finishing this study. I am deeply thankful to my parents for their unconditional love, support, and sacrifices. In addition, I am beholden to my girlfriend Andrea for all her love and hours proofing, listening, and counseling.

Finally, this dissertation is dedicated to my amazing children, Noah, Nathan, and Gwen. They have made me stronger, better, and more fulfilled than I could have ever imagined. I love you all so very much.

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CHAPTER ONE: INTRODUCTION

Purpose of the Study

The purpose of the study is to describe the college choice process of students at Washburn Institute of Technology (Washburn Tech), Topeka, KS. This study examined a sample of Washburn Tech's Spring 2018 traditional aged enrollees who completed high school/secondary education between 2013 and 2017.

Acquiring accurate, systematic data from a descriptive survey can illustrate Washburn Tech students' college aspirations, search methods, and choice process. This research provides a foundational description of Washburn Tech students' college-choice process, revealing patterns and connections for assessing needs and identifying areas for further research.

The study's theoretical framework is based on Hossler and Gallagher's (1987) college choice modeling. A starting place by many researchers over the last twenty-years (Bergerson, 2009), this comprehensive model breaks down a student's process for choosing a college into three phases: predisposition, search, and choice. Utilizing this model, the study examines the individual aspirations, available college search resources, and external influences on a student's choice to attend Washburn Tech. Gender, ethnicity, socioeconomic status, and academic ability (e.g., secondary GPA, placement exam scores, etc.) are also tabulated. Comprehending the background characteristics and unique educational paths of a Career and Technical Education (CTE) student will inform administrators and policymakers as they consider appropriate ways to evaluate educational progress for occupationally-oriented students (Hirschy, Bremer, & Castellano, 2011).

Background of Study

Washburn Institute of Technology is one of seven Title IV technical institutions, offering sub-baccalaureate programs, in Kansas. Founded as Northeast Kansas Vocational Technical School in 1964, becoming Kaw Area Technical School in 1992. The institution had been supported by Topeka Unified School District 501 Board of Education. In 2008, the school became known Washburn Institute of Technology (Washburn Tech) when its responsibility shifted to Washburn University, a public, primarily master-level institution, in Topeka, KS. This final transition was significant because it recognized Washburn Tech as a viable post-secondary option, marking the real beginning of Washburn Tech's post-secondary recruitment initiatives.

This section begins with important background information, defining sub-baccalaureate, Title IV institutions, institutional accreditation, and Career and Technical Education (CTE). The closing centers on how postsecondary technical education impacts Kansas.

Background Information

The National Center for Education Statistics (NCES) defines sub-baccalaureate postsecondary programs and credentials as those below the bachelor's degree level (Hudson, 2018). They are classified as two-year institutions, awarding licensures, certifications, and associate degrees. NCES defines Title IV as postsecondary institutions meeting the criteria for participating in the federal student financial aid program, as specified in Title IV of the Higher Education Act. To award federal postsecondary aid, the U.S. Department of Education (2018) states:

> Institutions must be accredited by a "nationally recognized" accreditor (or, for certain vocational institutions, approved by a recognized state approval agency), be authorized

by the state in which the institution is located, and receive approval from the Department through a program participation agreement.

Post-secondary accreditation agents assess the quality of a higher education institution's academic programs, faculty, degree criteria, and course offerings (U.S. Department of Education, 2018). Washburn Tech's 30 programs are included in Washburn University's accreditation by the Higher Learning Commission of North Central Association, Chicago, Illinois. The Kansas Board of Regents, the higher education governing board in Kansas, recognizes Washburn Tech as one of the state's 32 public institutions, making Washburn Tech eligible to award both federal and state student aid (KBOR, 2016).

Career and Technical Education, as it is known today, originated from a vocational education movement spanning from 1876-1926 in the United States, with roots traced to ancient times and significant European connections (ACTE, 2014; Gordon, 2003). CTE programs at both the secondary and postsecondary levels prepare students to be college and career-ready by providing core academic, employability, and job-specific technical skills (ACTE, 2014; Gordon, 2003; Hirschy et al., 2011; Levesque, Laird, Hensley, Choy, Cataldi, & Hudson, 2008; NCES, 2011).

CTE is a prominent element in a student's secondary education. Nearly every student (96.6 percent) in the United States leaves high school having taken some vocational coursework, though the extent of student involvement varies (Silverberg, Warner, Fong, & Goodwin, 2004, p. xxiv). Of the approximately 18,000 public high schools in the United States, 88 percent offer at least one occupational (CTE) course for 10th grade students (Levesque et al., 2008). About 92 percent of public high school graduates from the class of 2005 took at least one occupational course (ACTE, 2014; Levesque et al., 2008, p. 26).

Examining Kansas high school student technical institution enrollment, participation headcount (Table 1) in the State of Kansas's Excel in Career Technical Education initiative, providing high school students state-funded college tuition in approved technical courses offered by Kansas technical and community college, has increased 205%, from 3,475 students in 2010-11 to 10,600 in 2016-17 (Kansas Board of Regents, 2018).

Table 1

Excel in Career Technical Education Initiative (SB 155) - Participation

	AY 2011	AY 2012	AY 2013	AY 2014	AY 2015	AY 2016	AY 2017	% Change
Headcount	3,475	3,870	6,101	8,440	10,275	10,023	10,600	205%
College Credit Hours Generated	28,000	28,161	44,087	62,195	76,756	79,488	85,150	204%
Credentials Earned	--	548	711	1,419	1,682	1,224	1,459	166%

According to the Office of Vocational Adult Education (NCES, 2011), CTE is offered at all postsecondary levels, including two-year and four-year colleges. In 2005, more than 5,700 postsecondary institutions offered career education (Levesque et al., 2008, p. 76). Levesque et al. (2008) reported in 2005 that roughly 3,200 postsecondary institutions in the United States awarded one-year certificates, and approximately 2,500 institutions awarded associate degrees.

Postsecondary Technical Education Impacts Kansas

Postsecondary credentialing is critical for assuring the quality of life and strengthening the economic future in Kansas. Carnevale, Smith, and Strohl (2012) reported that in 2010 only 40 percent of Kansans (25 or older) had a postsecondary credential, and by 2018, 64 percent of the jobs in Kansas would require a postsecondary credential. Specifically, the Kansas economy, according to Carnevale, Smith, and Strohl (2012), will see increasing demands for a workforce with earned sub-baccalaureate credentials in high demanding CTE fields (e.g., health care, financial services, computer systems, etc.).

Annually receiving state appropriations above $20.5 million and serving over 14,000 students (KBOR, 2018), the seven Kansas technical institutions have always been significant education providers. In the past five years, Kansas has also seen a rise in CTE college students. In 2018, the Kansas Board of Regents (KBOR) reported a positive 34 percent five-year change in student enrollment in Kansas technical colleges and institutions. Enrollment at Washburn Tech has increased 54 percent during that time. In academic year (AY) 2017, Washburn Tech had 701 full-time students (enrolling in 12 or more hours) and 1,373 part-time students, for a total of 2,074 students (KBOR, 2018). Prior to AY 2013, part-time enrollment at Washburn Tech was on average 20 percent higher than full-time enrollment. During the past five-years, Washburn Tech has seen that gap on average increase to 40 percent (KBOR, 2018).

Many individuals and groups have a stake in students completing sub-baccalaureate educational programs, as they are critical to meeting workforce needs (Carnevale et al, 2012; Carnevale et al., 2013; Hirschy et al., 2011, Levesque, et al., 2008; Townsend, 2003). As occupations demands more complicated or specialized forms of knowledge, businesses turn to sub-baccalaureate institutions to provide the training (Hirschy et al., 2011, p. 300). Middle-skill jobs, or occupations that require education and training beyond high school but less than a bachelor's degree, are a significant part of the economy. In 2010, 59 percent of all jobs in the U.S. economy required postsecondary education and training, but by 2020 65 percent (approximately 10 million) will entail postsecondary education (Carnevale, et al., 2013).

In Kansas, of the 55 million job openings created by 2020, 30 percent will require some college or a two-year associate degree (Carnevale et al., 2013). At the federal level, the Obama Administration focused on sub-baccalaureate colleges, calling for five million additional graduates by 2020 (Hirschy et al., 2011). Career and technical education continues to draw

federal support. In July 2018, President Trump signed legislation which reauthorized the Carl D. Perkins Career and Technical Education Act, sending $1.2 billion a year to states to support career and technical-education programs offered in high schools and after graduation (Meckler, 2018).

Statement of the Problem

The choice of a college is an important, complex decision for any student (Cygan, 2014; DesJardins, 2001; DesJardins, Ahlburg, & McCall, 2006; Hossler, Braxton and Coopersmith, 2003; Hossler and Gallagher, 1987; Kim, 2004; McDonough, 2003; Moodie, 2009; Perna, 2006). Hossler, Braxton and Coopersmith (2003) defined the student college choice as "a complex, multistage process during which an individual develops aspirations to continue formal education beyond high school, followed later by a decision to attend a specific college, university or institution of advanced vocational training" (p.7).

What we know about a student's process in selecting a college has been limited to studies of high school students attending four-year residential institutions (Henry, 2012; Hirschy et al., 2011; Townsend, 2003). Factors that contribute to the necessity of the current study include: current mixed reviews of post-secondary CTE programs and a research gap on choosing a sub-baccalaureate institution and CTE programs.

With a 129 percent increase since 2006 in full-time equivalent (FTE) enrollment (KBOR, 2015), Kansas CTE institutions have become a viable postsecondary option for students. There is a lack of existing research concerning Kansas high school students' selection of sub-baccalaureate programs. Identifying why these Kansas students have become interested in technical colleges will not only fill a void in the college choice literature, but it will also assist

technical institutions' understanding how and why a prospective student decides to attend a technical institution.

Mixed Reviews of CTE Programs

Despite its recent popularity and support, the public still has a misconception about the quality, rigor, and relevance of CTE programs (Kidwai, 2011). In 2011, then Secretary of Education Arne Duncan, in answering a question concerning the decline in vocational schools, stated:

> I think it's an accurate critique. As a country, I think we did a better job teaching CTE programs 30 to 40 years ago, but somehow, we lost our way. I think we have to invest in these careers as well as whole other sets of new careers in the world of technology. Around the country, there are places that are doing this well, but they are pockets of excellence" (as cited in Kidwai, 2011).

Furthermore, the caliber of CTE students is mixed. It has been accepted that CTE high school graduates are significantly more likely than non-CTE high school graduates to delay college, alter career choices, and leave college without graduating (Deluca et al., 2006; Laird, Chen, & Levesque, 2006; Packard et al., 2012, Qi et al., 2011; Roksa, 2006). It has also been illustrated that CTE students are often negatively stereotyped as not being motivated to achieve academically, being interested only in material rewards, and from low socio-economic environments (Dare, 2006; Deluca et al., 2006; Lichtenberger, 2004, Packard, Leach, Ruiz, Nelson, & DiCocco, 2012; Roksa, 2006).

Gap in Research on Choosing to Attend a Sub-Baccalaureate Program

Theoretically, students considering postsecondary education have an overwhelming range of options (Iloh & Tierney, 2014). There are many studies addressing college selection

(DesJardins, 2001; DesJardins, Ahlburg, & McCall, 2006; Hossler, Braxton and Coopersmith, 2003; Kim, 2004; McDonough, 2003; Perna, 2006). Hirschy et al. (2011) and Townsend (2003) found that though educational researchers have studied college student success (including choice, attrition and attainment), most models explaining student decisions are based on the experiences of traditional students in 4-year, residential institutions. DesJardins, Dundar, and Hendel (1999) contend that "the literature on college choice is incomplete, particularly with respect to the examination of the factors affecting student choices at different types of institutions" (p. 118). Vocational institutions (i.e., community colleges, technical colleges) are often overlooked in enrollment management and/or college choice research due to perceived lenient admission policies and lower status (Cygan, 2014). In her review of college choice literature, Bergerson (2009) reported that Hossler and Gallagher's (1987) findings established a broad baseline for future studies on the complexity of the college choice process. By examining the choice process of students who enroll at technical institutions, this study joins other research that builds upon Hossler and Gallagher's model to specifically explore areas of stratified higher education college choice investigation.

It is widely documented that the field of CTE is under studied, making further research valuable for this emerging reform initiative (Alfeld & Bhattacharya, 2012; Bragg & Ruud, 2007; Brown, 2015; Cygan, 2014; Evans, 2014; Kotamraju & Mettille, 2012; Lewis & Kosine, 2008; Ryan, 2001; Shanklin, 2014; Yates, 2005). Kotamraju and Mettille (2012) stated that examining value, or return on investment (ROI), has been difficult because of "weak connectivity within CTE between the three elements that are needed to conduct ROI: data and measurement, accountability and evaluation, and research" (p. 1). The absence of research and attention

validates the opportunity to discover more about how and why a student selects a technical institution.

Research Questions

The intent of this study is to examine factors in the decision-making process of students who attend Washburn Institute of Technology. The objective is to explore the three stages of Hossler and Gallagher's (1987) college choice model as it relates to Kansas CTE participants' college decision.

The primary research question for this study is "How did Washburn Institute of Technology students navigate the college choice process?" This question is supported by three secondary questions.

1. (Predisposition) - How did students at Washburn Tech begin to think about going to college? When and how did the idea of going to college become a reality?
2. (Search) - What colleges did the students consider? How did students research the colleges?
3. (Choice) - What were the deciding elements (e.g., institution characteristics, career outlook, tuition costs, financial aid, admissions process, advising centers, etc.) in enrolling at the technical college?

Conceptual Framework

A descriptive quantitative research method, which involves gathering data that describes events, and then organizes, tabulates, depicts, and describes the data collection (Glass & Hopkins, 1984) is appropriate because the research questions are designed to describe the current college choice process for CTE college students. The study was based on a collection of descriptive responses to a series of survey questions about the decision to attend a technical

institution. A two-level graphic visual aid of the study's conceptual map is provided in Appendix A.

In chapter two, a literature review content map illustrates the relationship between research and topic. This study was guided by four bodies of knowledge. 1. CTE students; 2. Research on post-secondary vocational education (VE) in the United States and Kansas; 3. College choice theory; and, 4. Influences on college choice. All four are interconnected, each having a degree of relevance to the others.

As previously stated, the primary framework of this study is based on Hossler and Gallagher's College Choice Theory (1987). Three views have traditionally guided the student's college choice method: sociological, psychological, and economic (Hossler, Braxton, & Coopersmith, 1989; Hossler, Schmit, & Vesper, 1999; McDonough, 2003; Paulsen, 1990), and the essence of these three views are found in college choices models. Several models were reviewed, but Hossler and Gallagher's (1987) three-stage (i.e., predisposition, search, and choice) college-choice model was the main theory of interest. Overall, the most accepted model of college choice is Hossler and Gallagher's three broad stages of college choice (DesJardins, 2001; McDonough, 2003; Kim, 2004; DesJardins et al., 2006, Perna, 2006). Hossler et al. (2003) identified a model of student college choice as being:

1. Predisposition - The formation of college aspiration;

2. Search - Identification, selection of, and application to a select number of colleges; and

3. Choice - Admissions, enrollment, and attendance.

Exploring all three areas is important when creating an understanding of the college choice process. Kim (2004) stated that none of the stages should be viewed as separate, but instead as interrelated processes. Students will weigh the alternatives, deciding on an institution

that will best meet their needs and desires, after completing all stages (Hossler et al., 2003; Kim, 2004; Pena, 2006).

Significance of the Study

Because of the interest, demand, and support for CTE in Kansas, it is essential to understand the factors that influence students' choice to attend a technical institution. This research will specifically benefit enrollment management and student services at Washburn Tech. This study will also contribute to the general knowledge of CTE program utility, benefiting other Kansas CTE stakeholders.

Bess and Dee (2008) described, in recent years, higher education stakeholders have become increasingly skeptical of how well post-secondary institutions meet student and societal needs. Furthermore, though postsecondary enrollment management research is readily available, little is known about enrollment management at technical colleges (Cygan, 2014). Distinct exploration of postsecondary CTE college choice will have numerous benefits, including improved student advising, recruitment, and degree attainment (Cygan, 2014; Hirschy, Bremer, & Castellano 2011). This study will directly benefit Washburn Tech's enrollment managers by offering insight in how their enrolled freshmen decided to attend Washburn Tech. The finding will help Washburn Tech make decisions about serving and recruiting these students, a need, as mention, that increased in importance in 2008.

By providing analysis of how and why a sample of students chose Washburn Tech, the study improved our understanding of a CTE student's college choice process. Bremer, & Castellano (2011) described a lack of this kind of local evidence as contributing to the scarce understanding of background characteristics and unique educational paths of a CTE student. This

will assist technical college administrators and state policymakers as they consider appropriate ways to evaluate educational progress of CTE programs.

Organization of the Study

A further exploration of Washburn Tech students and their college choice follows this first chapter. The next chapter will review the literature pertinent to the study. The review includes an overview of the history of vocational education in the United States, exploration of critical CTE stakeholders, and a summary of theories of influences on a student's college and vocational choice. The third chapter explains the methodology used for the study, characteristics of the institutional setting, and the quantitative data methods for collection and analysis. The results and identified themes of the study organized within the stages of Hossler and Gallagher's (1987) college choice model are shared in the fourth chapter. The final chapter, containing findings of the study, connects the themes with current literature. Suggestions are presented for future research and implications for Kansas higher education are offered in the conclusion.

CHAPTER TWO: LITERATURE REVIEW

Introduction

This chapter expounds upon the conceptual framework presented in the preceding chapter, linking relevant literature topics by sharing three literature streams. The first stream explores the history of career and technical education (CTE) in the United States and establishes a background for the study, illustrating not only CTE's evolution, but its importance to the United States' economy. The second examines research that describes factors relevant to the typical CTE student, demonstrating the complexity in serving these students during their college choice process. The third literature stream explores research on college choice influences and theories. A connection to the purpose and application of this study is included in all three sections.

History of Career and Technical Education in the United States

A study on the choice to attend a technical institution would be incomplete without exploring the significant historical role and importance workforce education has had in the United States. Gordon (2003) claimed by understanding vocational education's grassroots today's students and professionals can better support tomorrow's workforce. Furthermore, chronicling the impact this academic area has had on society aligns with the purpose of post-secondary education studies. Describing colleges as historical institutions, Thelin (2004) stated "ultimately heritage is the lifeblood of our campuses" (p. xiii).

This historical review establishes the cornerstones of today's vocational education. The section begins with the origins of vocational education in the United States. It is followed by an overview of the renovation and standardization of workforce training. Finally, present-day vocational programs, preparing current CTE students for modern and future workforce demands, are explored.

Origins: Colonial Times

The United States has a long history of prioritizing an educated workforce (Altenbaugh, 1999; Barlow, 1967, 1976; Bennett, 1926; Cremin, 1972; Doerfel, 2003; Friedel, 2011; Gordon, 2014; Hayward & Benson, 1993; Hillesheim, 1980; Lynch, 2000; Prosser & Allen, 1925; Scott & Sarkees-Wircenski, 2008; Wonacott, 2003). Apprenticeship is the oldest known type of vocational education in the United States (Altenbaugh, 1999; Barlow, 1967; Cremin, 1972; Gordon, 2014; Prosser & Allen, 1925; Scott & Sarkees-Wircenski, 2008; Seybolt, 1917; Wonacott, 2003). Influenced by European countries, apprentice programs were often the sole opportunity, especially for poor students, to secure any education in colonial times. In exchange for learning a trade, the pupil would be indentured to the master until they were released from service, typically upon the death of the master. The traditional elements of the indentured apprenticeship agreement, in addition to learning a trade, included the master covering the pupil's living expenses (Altenbaugh, 1999; Barlow, 1967; Gordon, 2014; Scott & Sarkees-Wircenski, 2008; Seybolt, 1917; Wonacott, 2003).

The level of formal education received in the Colonial Period depended on a person's gender, social, and family status (Altenbaugh, 1999; Barlow, 1967; Cubberley, 1919; Gordon, 2014; Palmer, 1905; Seybolt, 1917; Vinovskis, 1987; Warren, 2005; Wonacott, 2003). Barlow (1976) wrote that 200 years ago, America had two kinds of formal apprenticeships: 1. Voluntary - following European customs and traditions, generally focusing on subjects to provisions of law; and 2. Involuntary – a master, providing means of taking care of poor children and orphans, became responsible for their personal and occupational needs. There were also two informal methods of work preparation. A parent would share with a child the fundamentals of an occupational trade. One could also become a craftsman through long periods of observing and

imitating a master (Altenbaugh, 1999; Gordon, 2014; Scott & Sarkees-Wircenski, 2008; Seybolt, 1917; Wonacott, 2003).

Growth: Industrial Revolution

The vocational education movement rose at the dawn of the United States' Industrial Revolution (Barlow, 1967, 1976; Gordon, 2014; Hayward & Benson, 1993; Seybolt, 1917; Wonacott, 2003). Switching to a non-customized, mass production system, largely to satisfy the newly established global market, American businesspeople quickly sought out new technology for their manufacturing operations. This marketplace shift set the stage for a new form of American education and public schools that accelerated comprehensive vocational training.

Founded in 1814, the Farm and Trade School in Boston, MA was one of the first formal institutions to provide broad vocational skills preparation. Its purpose was to provide orphans the benefits of both academic and employment schooling (Gordon, 2014; Wonacott, 2003). The Baltimore Manual Training High School, in Baltimore, MD, was opened in 1884 as the first separate manual training school. The mission of this school was also to provide both manual and academic training, but as a public trade school, it was open to more students (Gordon, 2014). Gordon (2014) explains that this high school was significant because its curriculum was replicated in many other cities in America and can still be observed today.

Reformation: Separatism

At the beginning of the 20th century, with a growing global economy, the United States needed to change workforce education by increasing quality vocational programs and improving student performance (Barlow, 1967; Gordon, 2014; Hayward & Benson, 1993; Scott & Sarkees-Wircenski, 2008; Wonacott, 2003). According to Hillesheim and Merrill (1980) the National Association of Manufacturers' Committee Report of 1914 claimed that "there were more

vocational schools in Bavaria than in the entire United States" (p. 368). Subsequently the separatist movement in education began with numerous education supporters and reformers demanding significant attention to developing vocational education in the United States. During this separatist movement, a new degree of federal and state support occurred. In effect, elements of this restructuring period are still used in today's labor force preparation (Barlow, 1967; Gordon, 2014; Hayward & Benson, 1993; Scott & Sarkees-Wircenski, 2008; Smith, 1914; Wonacott, 2003).

This American vocational education revival began in 1914 when the U.S. Congress, recognizing the need for federal intervention, created the Commission on National Aid to Vocational Education to consider federal financial assistance for vocational education in America (Smith, 1914). The Commission's report emphasized that public education was falling short on equality of education to the mass of children (Smith, 1914). Public schools, despite being open to every child, lacked aim and purpose, preventing children from taking advantage of schooling beyond a certain grade. Only a few students, (often from rich families) were prepared for college, and the rest either couldn't afford college or wanted to go into industry (Miller, 1985).

The Smith-Hughes Act of 1917, creating the Federal Board for Vocational Education, was the federal government's first decree to legitimatize job-related instruction in the United States (Swanson, 1966). Upon the states submitting a vocational education plan, the Smith-Hughes Act provided federal funding separate from traditional (i.e., classical, regular) education support. As well as separate funding, Smith-Hughes established teaching credentialing and curriculum standards (Lynch, 2000). The newly established Federal Board for Vocational

Education mandated the 50-25-25 rule: 50 percent of students' time in shop work, 25 percent in closely related subjects, and 25 percent in academic courses (Hayward & Benson, 1993).

Wonacott (2003) cited Commissioner of Education for Massachusetts David Snedden's *The Problem of Vocational Education* (1910) as creating significant context for reformation of U.S. vocational education, specifically at the state level. While Snedden was state commissioner, Massachusetts divided its workforce schooling into five areas of study:

1. Professional education – preparing attorneys, teachers, physicians, engineers;
2. Commercial education – bookkeepers, clerks, stenographers, business leaders;
3. Industrial education – machinists, metal workers, factory hands;
4. Agricultural education – skill and knowledge for tilling soil and managing domestic animals; and
5. Education in the household arts – preparing young females for dressmaking, cooking and home management (Wonacott, 2003).

The state also institutionalized a wide range of specialized schools and courses across the state, pioneering assessment of education programs by creating norm standards for its vocational education system.

Norming: Vocational Education Act

A major shift in federal policy and direction began in the early 1960s with the passage of the Vocational Education Act of 1963 (Barlow, 1967, 1976; Friedel, 2011; Gordon, 2014; Hayward et al., 1993). The federal government raised its expectations of state plans with direct focus on a state's efforts to train poor and disabled students from poor communities.

In 1983, President Ronald Reagan's National Commission on Excellence in Education issued its report entitled *The Nation at Risk: The Imperative for Educational Reform* (Friedel,

2011). The Cold War tone of this report demonstrated the national urgency of having a globally competitive educational system and graduates. It called for increased accountability and international comparisons of student performance. In response, the Carl D. Perkins Vocational Education Act (Perkins) of 1984 amended the Vocational Education Act of 1963, requiring states to annually report the ways they provide students, particularly from at-risk populations, access to timely and applicable occupational training (Friedel, 2011; Gordon, 2014; R. Lynch, 2000; Scott et al., 2008; Wonacott, 2003). The law created a funding formula based on a state's proportion of specific age cohorts to the nation's total population (Friedel, 2011; Gordon, 2014; Scott et al., 2008; Wonacott, 2003). As the result of funding being aligned with the number of enrolled students, there was an unprecedented increase in vocational education enrollment in the late 1980s and early 1990s (Gordon, 2014; Lynch, 2000; Scott et al., 2008). Perkins also stipulated that states must report on standardized core indicators of performance, and that vocational programs be on three-year evaluation cycles, incorporating and partnering with various agencies within the state (Friedel, 2011).

Present Day: Contemporary Career and Technical Education

By the beginning of the 21st Century, due to new directions in the economy and research in student motivation, career-based education in the United States, specifically at the high school level, began another extensive metamorphosis (Lynch, 2003). One of the most significant changes, according to Scott et al. (2008), came during the 2006 reauthorization of the Carl D. Perkins Vocational Education Act. Moving away from using the terms "vocational and technical education" to "career and technical education," Perkins established a requirement for secondary and postsecondary systems to work together in creating a bridge for CTE students to be both "college and career ready" (ACTE, 2016; Scott et al., 2008). High school graduates were still to

have a solid foundation in both academic and technical areas, but the federal government also expected states to have students to matriculate into postsecondary programs which would lead students to high skill and high wage occupations (Gordon, 2014; Lynch, 2000, 2003; Scott et al., 2008).

To bolster Perkins and provide state support, the National Association of State Directors of CTE Consortium (NASDCTEc), in conjunction with the U.S. Department of Education, managed the development of 16 Career Clusters® in 2000 (ACTE, 2016; Gordon, 2014; Scott et al., 2008). For the first time, CTE state boards were provided specific plans and suggested outcomes to develop their CTE programs, providing a model for consistency across all states (Scott et al., 2008). ACTE defines a Career Cluster as "a grouping of occupations and broad industries based on commonalities" incorporating "the skills and knowledge, both academic and technical, that all students within the Career Cluster should achieve regardless of their pathway" (2016). These 16 clusters, representing over 79 pathways, included: Agriculture, Food & Natural Resources; Architecture & Construction; Arts, A/V Technology & Communications; Business Management & Administration; Education & Training; Finance; Government & Public Administration; Health Science; Hospitality & Tourism; Human Services; Information Technology; Law, Public Safety, Corrections & Security; Manufacturing; Marketing; Science, Technology, Engineering & Mathematics; and Transportation, Distribution & Logistics (ACTE, 2016; Scott et al., 2008).

Today, career and technical education continues to be a big business. Lynch (2000) reported that 35,000 public and private institutions offered CTE programs, with 93 percent of the nation's 15,200 comprehensive high schools offering one or more CTE course. In 2015, U.S. Department of Education reported granting $1.12 billion in state CTE funding (ACTE, 2016).

Throughout American history, employers and employees have pushed educators to provide relevant and timely work-force training. CTE in the United States has evolved to include both academic and technical skills serving many careers, providing significance to a study on current CTE students. The next section further explores the relationship between academic and technical skills by describing the CTE student who has a large stake in contemporary professional education in the United States.

Career and Technical Education Students

Bess and Dee (2008) define "stakeholders" as an organization's environmental elements that have a vested interest. Economically, socially, and politically, vocational education has significant stakeholders, as research has shown that for the United States to stay competitive in global markets, students must fill open positions in high demand fields by earning a technical sub-baccalaureate credential (e.g., licensure, certificate, degree, etc.) (Carnevale, Smith, & Strohl, 2010, 2013; Hirschy, Bremer, & Castellano, 2011; Levesque et al., 2008; Townsend, 2009). Sub-baccalaureate colleges, like all post-secondary institutions, spend a lot of their resources cultivating relationships with external stakeholders (Bess & Dee, 2008). It could be argued that prospective CTE students, like any college student, are also significant higher education stakeholders due to the numerous outcomes of a successfully educated society (Baum, 2005; Bergerson, 2009; Bess et al., 2008; Carnevale et al., 2010, 2013; Levesque et al., 2008; Palmer, Hayek, Hossler, Jacob, Cummings, & Kinzie, 2004; Pascarelli & Terenzini, 2005; Perna, 2005; Walpole, 2003).

According to Hirchy, Bremer, and Castellano (2011), "Understanding the ways in which CTE students are distinct is essential to creating effective approaches to improve retention and other outcomes for occupational students" (p. 298). The literature reviewed in this section

establishes the platform for the specific purpose of this study. This includes a summary on CTE student traits, including interest, demographics, and performance. It concludes with generalized findings of CTE students' motivations and behaviors in pursuing a technical education credential.

CTE Student Traits

CTE students pursuing associate degrees differ from students studying academic majors at 2-year institutions in several ways (Hirschy et al., 2011). Citing Bailey et al. (2003), Hudson, Kienzl, and Diehl (2007), and Levesque et al. (2008), Hirschy, Bremer and Castellano (2011) detailed the characteristics (Table 2) of U.S. undergraduates enrolled 2004 by level and type of intended credential, including CTE students.

Recent CTE student success, measured by postsecondary credentialing and enrollment, is significant. The National Center of Educational Statistics (Bersudskaya & Chen, 2011) reported that four out of five secondary CTE graduates who pursued postsecondary education after high school had earned a credential or were still enrolled two years later. From 1997 to 2007, there was a 58 percent increase in less-than-one-year certificates awarded at two-year institutions. There was a 28.5 percent increase in certificates that take at least one year but less than two years and an approximately 19 percent increase in associate degrees (Bersudskaya et al., 2011). Hussar and Bailey (2011) project, using NCES data, almost a million more students will enroll in two-year, sub-baccalaureate programs (including those at technical colleges) by 2021.

Table 2

Selected demographic and background characteristics of credential -seeking undergraduates, by level of credential sought and type of program (academic or CTE)

	Bachelor's (both academic and CTE programs, %)	Associate's (academic programs only, %)	Associate's (CTE programs only, %)	Certificate (CTE programs only, %)
Independent financial status	36.5	49.5	64.6	72.6
Female	54.7	58.8	61.9	65.8
White	69	59.9	58.9	51.1
African American	12	15.1	18.5	22.9
Has financial aid	74.2	50.7	58.8	68.4
Parent has high school degree or less	26.7	35.8	40.9	45.1
Worked full-time	24.3	34.7	40.6	38.1
Age 25 or older	19	25	37	41.5
Self-identifies as "an employee who studies"	17.2	27.3	33.4	33.7
Attended part-time during the course of a full academic year	16.5	31	31.9	17.7
Postsecondary grade point average 3.5 or higher	25.8	25	29	42.3
Postsecondary grade point average of less than 2.0	7.5	12.5	11.1	9.2
Married	15.1	18.6	27.7	27.2
Took a vocational curriculum in high school[a]	4.4	11.4	18.5	23
Has a disability	10.1	12	12.2	13
Obtained a GED[b]	1.6	6.6	8.6	17.9
Previous bachelor's degree	3.7	5.9	6.3	7.6

Note: CTE = career and technical education. Unless otherwise noted, all data are from Levesque et al. (2008) and represent undergraduates enrolled in 2004.

a. High school curriculum data are from the National Education Longitudinal Study 1992 database as reported by Bailey et al. (2003, pp. 30, 50) and represent students who began their postsecondary education in 1992-93.

b. GED data are from Hudson, Kienzl, and Diehl (2007, p. 19) and are drawn from the Beginning Postsecondary Students Longitudinal Study of students who began their postsecondary education in 1995-96.

Source: Hirschy, A. S., Bremer, C. D., & Castellano, M. (2011). Career and Technical Education (CTE) Student Success in Community Colleges a Conceptual Model. Community College Review, 39(3), 298.

Laird, Chen, and Levesque (2006) found, from examining transcript data from the National Educational Longitudinal Study 1988:2000, people who are first generation college students, growing up in low income families, are twice as likely to enroll in CTE college programs as high-income peers from college-educated families. CTE students are more likely to be female (61.9% vs. 58.8%), African-American (18.5% vs. 15.1%), older than 24 (37.0% vs. 25.0%), married (27.7% vs. 18.6%), first-generation college students (40.9% vs. 35.8%), and financially independent from their parents (64.6% vs. 49.5%) (Hirschy et al., 2011, p. 298-299). Deluca et al. (2006) found that black students participate in CTE programs at a higher rate than other students, low income students are more likely to participate in CTE versus academic courses, participation in CTE programs doesn't impede college attendance, and a high CTE to academic program participation ratio equals lower college attendance.

CTE Students Motivations and Behaviors

As stated in chapter one, Kansas secondary students have never been more interested in higher technical education, earning approximately 194,851 technical college credits, approximately 153 percent increase since AY 2015 (KBOR, 2018). High school students interested in Kansas post-secondary institutions has significantly grown in recent years. In AY 2012, KBOR (2018) reported Kansas technical college enrollment consisted of 84 students (8%) under the age of eighteen (traditional high school student age). By AY 2017, that number had grown to 573 students (40%). This represented a 585 percent five-year increase in 18 and under enrollment (KBOR, 2018). With approximately 19,000 declared majors and 9,257 total graduates, health science was the leading CTE postsecondary academic discipline at Kansas community colleges and technical institutions in 2013 (KBOR, 2014). Overall, KBOR (2014)

reported that 48 percent of the 13,384 CTE postsecondary graduates were employed upon exiting, averaging $26,597 in annual wages.

CTE students are often negatively stereotyped as not being motivated to achieve academically, being interested only in material rewards, and not being from middle to upper socioeconomic classes (Dare, 2006; Deluca et al., 2006; Lichtenberger, 2004, Packard, Leach, Ruiz, Nelson, & DiCocco, 2012; Qi & Cole, 2011; Roksa, 2006). This view has contributed to the perception that vocational institutions are lower in educational quality and their students are less academically prepared compared to universities and their students (Dare, 2006; Deluca et al., 2006; Lichtenberger, 2004; Moodie, 2009; Packard, Leach, Ruiz, Nelson, & DiCocco, 2012; Roksa, 2006). CTE high school graduates are significantly more likely to delay college, alter career choices, leave college without graduating, and enroll in a community college or technical college before a four-year institution (Deluca et al., 2006; Laird, Chen, & Levesque, 2006; Packard et al., 2012, Qi et al., 2011; Roksa, 2006).

Recognizing the need to encourage to students to pursue vocational education, several states, including Indiana, Oklahoma, Kentucky, and Wisconsin have passed specific legislation to encourage completion of sub baccalaureate programs (Hirschy et al., 2011). Likewise, in 2012, the Kansas Legislature passed Senate Bill 155: Excel in Career Technical Education Initiative (SB155). Under SB155, the state pays the tuition for a Kansas junior and senior secondary student enrolled in a technical college course at a Kansas 2-year institution and financially rewards school districts for the number of high school graduates with earned CTE credentials. The Kansas Board of Regents (2018) attributes a recent increase in high school student CTE post-secondary enrollment to SB155. The state spent $28 million dollars on incentives in FY 2018.

Persistence in attaining a CTE credential has also been met with the common challenges and disadvantages of transferring (e.g., lower human capital opportunities, social adjustments, GPA decline, lack of student support, etc.) for both CTE and non-CTE transfer students (Bound, Lovenheim, Turner, 2010; Ishitani, 2008; Laird et al., 2006, Melguizo, Kienzl, & Alfonso, 2011; Qi et al., 2011, Reynolds, 2011, Roksa, 2006). Reynolds (2011) found, using the National Education Longitudinal Study 1988:2000, that there are substantial negative effects on educational attainment and labor market wages/earnings from transferring from a two-year college as opposed to attending a four-year institution for all four years of baccalaureate study. Melguizo et al (2011) reported that nearly half of all high school graduates with bachelor's degree aspirations follow the community college transfer path, requiring them to be accepted as transfer students at a four-year college (p. 267). Short-term certificate incentive programs also adversely affect associate degree attainment (Roksa, 2006).

This review of CTE students' traits and motivations support the study's questions. For example, investigating the relationship between the presented general negative stereotypes and Washburn Tech students was a focus of this study. In addition, the study explored if the sample group participate in the state's program to promote Kansas technical education. Literature on college choice influences and theories is shared, directly supporting the framework of the study.

College Choice – Influences, Vocational Development and Theories

There are several studies that explore college choice, though understanding it is challenging because everyone approaches a choice differently. For decades researchers have gathered information and performed analyses on these important decisions (Bergerson, 2009; Chenoweth & Galliher, 2004; Hemsley-Brown, 1999; Hossler & Gallagher, 1987; Hoyt & Brown, 2003; Krieshok, Black, & McKay, 2009; Palmer et al., 2004; Pitre, Johnson, & Pitre,

2006; Thompson & Subich, 2006; Barbara K. Townsend, 2009; Walker & Tracey, 2012) just to discover that there is still more to learn. According to Galotti, Ciner, Altenbaumer, Geerts, Rupp, and Woulfe, (2006) much of the literature on decision-making styles is limited to only general decision-making using self-reported data. Research beyond the decision-making process that includes the impact of expected outcomes on students selecting a technical institution is incomplete (Bergerson, 2009; Cygan, 2014; Palmer et al., 2004; Barbara K. Townsend, 2009).

Influences: Social and Cultural Capital and College Outcomes

This study's survey questions were developed to explore the many factors which influence CTE student's college choice. Lillis and Tian (2008) stated that location, availability of major, academic reputation, quality of faculty, and tuition are major factors in choosing a college. Another key factor affecting college choice is a student's knowledge financial assistance to cover both tuition and other college expenses. (DesJardins, 2001; Hossler et al, 2003; McDonough, 2003; Kim, 2004; DesJardins et al., 2006, Perna, 2006, St. John, 2006). This study uses over 20 survey questions that examine the impact of these identified influences on both researching and selecting Washburn Tech.

With nearly 10 survey questions, the study also analyzes the weight of three influences on Washburn Tech students' college choice process. The discussion to follow combines two of these influences: social and cultural capital, followed by the third influence, with an examination of known identified outcomes of higher education.

Influences: social and cultural capital. Influencing both the student's college choice and academic success is the student's social and cultural capital. Social capital focuses on how sustained social networks of parents and friends are supportive of the decision to attend college (Perna & Titus, 2005). Walpole (2003) defines cultural capital as the system of attributes, such as

language skills, cultural knowledge, and mannerisms, derived in part from one's parents, which defines an individual's class status. Having family members who are college graduates and hold expectations that others in the family will attend college fuels the cultural capital for a student to choose a college.

There are four specific survey questions which provided insight to a Washburn Tech student's social and cultural capital influences. From family encouragement to friends' accompaniment, the study will give more detail on how these students decided to ultimately attend Washburn Tech.

College education outcomes. The outcomes of higher education demonstrate the benefits earning a postsecondary credential (Baum & Payea, 2005; Carnevale, Smith, & Strohl, 2010, 2013; Galotti et al., 2006; Hossler & Gallagher, 1987; Levesque, Lauen, Teitelbaum, Alt, & Librera, 2000; Palmer et al., 2004; Pascarella & Terenzini, 2005; Perna, 2005; Walpole, 2003, 2007). Pascarella and Terenzini (2005) reviewed literature on how college affects students, reporting that there are several outcomes of college that include changes in learning and cognitive abilities, psychosocial behaviors (e.g., identity, self-concepts, locus of control, etc.), attitudes and values, and moral development. Perna (2005) found that higher education connects with numerous individual economic (e.g., income, health insurance coverage, public assistance, job satisfaction, etc.) and non-economic (e.g., health-related benefits, leisure activities, civic engagements, etc.) benefits. It has also been found that educated citizens create a high-rate of return on investment for society because college graduates earn more money, which leads to higher tax revenues and lower demands on social support programs (Baum & Payea, 2005). Specifically, Dalton (2015) reported that CTE students who earned an associate degree had a higher annual income ($34,000) than non-CTE students with an associate degree ($22,000).

Even while considering the known outcomes of college education, researchers still believe that there is more to explore (Baum & Payea, 2005; Bragg & Ruud, 2007; Galotti et al., 2006; Germeijs & De Boeck, 2003; Hanushek, Schwerdt, Woessmann, & Zhang, 2016; Hoachlander, Sikora, & Horn, 2003; Pascarella & Terenzini, 2005; Walpole, 2003, 2007). Contributing to filling this gap, this study asks Washburn Tech students to answer several questions that describe the bearing college outcomes had on their higher education decision.

Vocational Choice Development

There have been numerous studies that have found that vocational choice is a complex process, requiring a long period of time to develop (Armstrong, Rounds, & Hubert, 2008; Bright, Pryor, & Harpham, 2005; Bryant, Zvonkovic, & Reynolds, 2006; Garcia-Sedeñto, Navarro, & Menacho, 2009; Germeijs & Verschueren, 2007; Gianakos, 1999; Guy, 2011; Hartung, Porfeli, & Vondracek, 2005; James, 2007; Krieshok et al., 2009; Sauermann, 2005; Thompson & Subich, 2006; Walker & Tracey, 2012). A student's developed learning process involving their thoughts, manners, emotions, actions, and perceptions, according to Watson and McMahon (2005), interacts with their career development.

Often, career development research has been limited to exploring the choices made by traditional college students (Galotti et al., 2006). Gianakos (1999), however, cites research that finds students are making vocational decisions very early in their academic training. Hannah and Robinson (1990) reported that nearly 50% of freshmen surveyed nationwide desired assistance in making career decisions. By matching a student's ultimate vocational choice to the way, they selected a major, Galotti et al. (2006) researched whether people with different approaches to decision-making reported considering different numbers of criteria or options or consulting a different number of information sources. Their data suggested that decision making occurs not in

the way information is gathered or structured, but rather in the ways one responds affectively to the process or sees oneself as approaching it. Students' scores did not correlate with structural methods of decision-making (e.g., quantity of considered options; criteria used; information sources gathered; etc.). Galotti et al. (2006) reported that whether rational, intuitive, avoidant, dependent, or spontaneous in their decision-making approach, students gathered and considered the same amount of information when making an important decision. In the end, though students who identified with a rational decision-making correlated more strongly than the other approach types in thinking and learning attitudes and planning strategy scores, Galotti et al. (2006) states more is required to determine whether using different styles will lead to better long-term decision-making satisfaction.

It has been "hypothesized that the way individuals cope with decisional tasks during a career decision-making process has important consequences for implementing the career decision" (Germeijs & Verschueren, 2007, p. 223). Many students reported career indecisiveness due to either a lack of clarity in understanding how their needs could be satisfied in a career (Dziuban, Tango, & Hynes, 1994) and/or differing levels of comfort with their decision (Newman, Fuqua, & Minger, 1990). Gianakos (1999) surveys 172 undergraduate students from a large Midwestern university on their career decision as it relates to their selected academic major. She reports that students have greater confidence in their career decision if during high school they had stable professional role models (e.g., parents, supervisor, teacher, counselor, etc.) to guide their career choice.

Investigating a student's college choice as it relates to their planned career creates a clearer picture of decision making methods. Literature on this issue led to the development of several questions, the focus of which was to learn more about selected degree programs and the

level of confidence in the decision to attend Washburn Tech as a positive impact on their future career.

College Choice Research

Scholars have found that student college choice involves many steps, and can be analyzed using numerous models (DesJardins, 2001; DesJardins, Ahlburg & McCall, 2006; Hossler et al., 2003; Kim, 2004; McDonough, 2003, Perna, 2006). Bergerson (2009) and Palmer et al. (2004) provide a thorough review of college choice influences and theories. Following Hossler and Gallagher (1987) who published their three-stage college choice model, Bergerson (2009) identifies Paulsen (1990) as the trigger which launched a new direction of college choice research.

In this final part of the chapter, Hossler and Gallagher's 1987 model is further explored. The additional college choice studies developed after 1990 are also analyzed. The portion concludes with aligning the research with the purpose of this study.

Hossler and Gallagher's three-stage of college choice model. As previously stated, the most accepted analysis of college choice is Hossler and Gallagher's 1987 three-stage model of student college choice (DesJardins, 2001; DesJardins et al., 2006; Hossler et al., 2003; Kim, 2004; McDonough, 2003, Perna, 2006). Due to the significant impact it has had on college choice research, this three-stage model is a necessary factor in considering this study's theoretical framework.

Hossler and Gallagher's college choice three-stage design was developed from their extensive review of college choice literature (Hossler, Braxton, & Coopersmith, 1996; Hossler & Gallagher, 1987; Palmer et al., 2004; Stage & Hossler, 1989). It is identified by Bergerson (2009) as an example of comprehensive models which "emphasize students' process of

collecting and assessing various types of information about postsecondary institutions" (p. 14). A student goes through these stages between 7th and 12th grade (Cabrera & La Nasa, 2000). Each of these phases are connected, creating an accumulation of skills required for secondary students to make a certain postsecondary decision (Bergerson, 2009; Cabrera & La Nasa, 2000; Hossler et al., 1996; Hossler & Gallagher, 1987; Palmer et al., 2004; Stage & Hossler, 1989).

Predisposition is the first stage. Hossler and Gallagher (1987) define the predisposition stage as the developmental phase in which students determine whether they would like to continue their formal education beyond high school. Students begin this stage as early as the eighth grade, establishing their career and education goals by the ninth grade (Stage & Hossler, 1989). From parents, to high school college programs, students in the predisposition phase collect information and assistance from many sources to guide their postsecondary decision (Bergerson, 2009; Cabrera & La Nasa, 2000; Hossler et al., 1996; Hossler, Schmit, & Vesper, 1999; Palmer et al., 2004; Paulsen, 1990; Perna & Titus, 2004; Stage & Hossler, 1989).

In the second stage, known as the search stage, the student explores attributes and values that characterize postsecondary educational alternatives, and learns about and identifies the right attributes to consider in their choice process (Hossler et al., 1996; Hossler & Gallagher, 1987; Hossler et al., 1999). Information gathering is essential to the search stage (Hossler et al., 1987). Starting in tenth grade and ending by twelfth grade (Hossler et al., 1996; Perna, 2006), secondary students will take college placement exams, visit campuses, review academic program materials, and talk to peers about going to college (Bergerson, 2009; Cabrera & La Nasa, 2000; Palmer et al., 2004).

Students formulate a choice in the final stage, utilizing collected information and developed aspirations to select an institution to attend (Hossler et al., 1987). According to

Cabrera and LaNasa (2000) and Perna (2006) the college choice occurs between a student's eleventh and twelfth grades. Postsecondary institutions, like Washburn Tech, should recognize that in this latter stage students will weigh characteristics and offerings to decide on the college that will best meet their needs (Hossler et al., 1996; Hossler et al., 1999; Kim, 2004; Palmer et al, 2004; Pena, 2006).

Kim (2004) states that none of the stages in Hossler and Gallagher's 1987 college choice model should be viewed individually, but instead as one integrated process. This is the basis upon which the decision to use their model to comprehensively explore the college choice of Washburn Tech traditional-aged students rests.

Additional college-choice research. Hossler and Gallagher's model is considered a broad, developmental illustration of a student's postsecondary plan (Bergensen, 2009; Cabrera et al., 2000). The process model has created numerous opportunities for further study (Bergerson, 2009; Bers & Galowich, 2002; Braddock et al., 2008; Cabrera & La Nasa, 2000; Confer & Mamiseishvili, 2012; Cygan, 2014; Hoyt & Brown, 2003; Palmer et al., 2004; Paulsen, 1990; Perna, 2006; Barbara K Townsend, 2003). These continuous explorations have led to several important discoveries. McDonough (2003) found that students filter their college options through the lenses of their academic achievement, their economic circumstances, their field of vision, and their values. Designing a conceptual model based on works of St. John (2006), Perna (2006) stated that the understanding of college choice, specifically where it concerns price (tuition and fees) and financial aid, can be reviewed in four layers: social & economic, higher education, school and community and individual habitus - lifestyle, values, dispositions and expectations of social groups. Kim (2004) illustrated Chapman and Jackson's (1987) three major components of college choice behavior: perception formula, preference formation, and choice. Lillis and Tian

(2008) stated that in addition to location, availability of major, academic reputation and quality of faculty, tuition plays a major factor in choosing a college. College savings behaviors demonstrate the level of college aspirations (Hossler and Vesper, 1993). Nora (2004) found that a student's belief that they will be personally accepted at an institution influenced choice. Moodie (2009) stated that college choice was linked to consumer-based decision making depending on institution-type. Finally, examining students' college choice relative to their locus of control, or the perception of the level of control one believes to have over life events, Martin and Dixon (1991) reported that outside influences on selecting a college are more significant to students who believe that external forces determine life events (external locus of control), than those students who believe only they control the outcomes of their life (internal locus of control). The literature shared in this portion not only creates an understanding of this study's purpose and framework, but also shows the opportunities to learn more about college choice. From college savings to tuition costs to academic quality, several questions have been designed to incorporate both Hossler and Gallagher's 1987 three-stage college choice process model and the shared additional findings.

This chapter is important to assuring this study meets its purpose to describe the college choice process of Washburn Tech students. In the coming chapters, the study's methodology, findings, and conclusions will build on this ground work, giving a fresh perspective on a student's process of deciding to attend a technical college.

CHAPTER THREE: METHODOLOGY

Introduction

The purpose of this study is to describe the college choice process of traditional aged students at Washburn Institute of Technology, Topeka, KS, a sub-baccalaureate technical institution. Using a descriptive statistical analysis including means, standard deviations, and frequencies, the following objective and three questions guide this study:

Objective – Explore the three-stages of Hossler and Gallagher (1987) college choice model

1. (Predisposition) – How did the sample students at Washburn Tech begin to think about going to college? When and how did the idea of going to college become a reality?
2. (Search) - What colleges did the students consider attending? How did students research the colleges they might attend?
3. (Choice) - What were the deciding elements (e.g., institution characteristics, career outlook, tuition costs, financial aid, admissions process, advising centers, etc.) students considered when enrolling at the technical college?

This study describes the college choice process using a sample of Washburn Institute of Technology students. The study identified: 1. reasons for attending the college; 2. methods utilized to make the college decision; and 3. influential elements for enrolling. This will significantly assist technical college administrators and state policymakers in recruiting, regulating, supporting, and evaluating Kansas technical colleges and programs.

Setting

A student's post-secondary educational journey has an infinite number of directions, and this greatly impacts student considerations when choosing a college or university. The choice is further complicated based on the student's desired vocation and its required credential (Chenoweth & Galliher, 2004; Cygan, 2014; Hossler & Gallagher, 1987; Palmer et al., 2004; Pitre, Johnson, & Pitre, 2006; Thompson & Subich, 2006; Townsend, 2003). The participants of this study were Spring 2018 Washburn Tech students who completed their secondary education between 2013 and 2017.

As explained in chapter one, Washburn Tech is one of seven technical institutions in Kansas. Being in the capital city of Kansas, Washburn Tech administrators often testify and report on career and technical education in Kansas to state government officials. Washburn Tech has a unique relationship with Washburn University, Topeka, KS, allowing students to transition between institutions. Washburn Tech offers 30 technical programs in areas of advanced manufacturing, business, computer and electronic technology, construction, drafting and design, health care, hospitality and human services, and transportation (KBOR, 2017).

Washburn Tech serves post-secondary and high school students. The institution is also involved in supporting local business and industry by providing continuing education and customized training specific to their work force needs (KBOR, 2017). With a graduation rate of 81 percent and a job placement rate of 94 percent, Washburn Tech has one of the highest graduation and placement rates of any of the 26 two-year public community colleges and technical institutions in Kansas (KBOR, 2017).

Washburn Tech has had significant enrollment growth (Table 3) from Academic Year (AY) 2012-2017 (KBOR, 2018). In AY 2012, Washburn Tech's enrollment headcount was 1,348 students, with 835 full-time equivalent (FTE), combining full-time and part-time students together, enrolled. Five years later Washburn Tech's headcount increased by 53.9 percent, with 2,074 students enrolled, representing 1,190 FTE enrollees.

Table 3

Washburn Institute of Technology Enrollment - Headcount and FTE - Academic Year 2012-2017

Category	AY 2012	AY 2013	AY 2014	AY 2015	AY 2016	AY 2017	% Change AY 12-17
Enrollment Headcount	1,348	1,551	1,882	1,884	2,000	2,074	53.90%
Full-Time Equivalent	835	885	1,072	1,106	1,180	1,190	42.40%

Per the KBOR (2018), from AY 12- 18 student ethnicity/diversity changed at Washburn Tech (Table 4). White student enrollment increased 432 students (72%). Hispanic students grew from 65 enrollees in AY 2012 to 180 in 2017 (179%). Black or African-American student enrollment increased by 30 students (47%). The largest percentage of increased enrollment was from students who identified with two or more races. Since AY 2012, 63 more students (294%) selected two or more races. It is important to note that starting Fall 2010, technical colleges were to report student's race/ethnicity per the U.S. Department of Education National Center for Education Statistics' (NCES) Integrated Postsecondary Education Data System (IPEDS). Four newly created or modified categories were created by IPEDS. A student's race/ethnicity can now be reported as: Black or African- American, Asian, Native Hawaiian/Pacific Islander, and Two or more races (KBOR, 2017). This impacted the reporting of certain ethnic groups. KBOR (2018) explained:

> The Hispanic ethnicity category includes all students who reported a Hispanic ethnicity, regardless of their race selection. Due to these race/ethnicity modifications, starting in

Fall 2010, the students in the Hispanic ethnicity category increased; the students in the "Unknown" category decreased (p. 109).

Table 4

Washburn Institute of Technology Enrollment by Race/Ethnicity - AY 2012-2017

Race/Ethnicity	AY 2012	AY 2013	AY 2014	AY 2015	AY 2016	AY 2017	% Change AY 12-17
White	601	506	472	577	736	1033	71.8%
Hispanic	65	74	147	179	168	180	178.9%
Black or African-American	65	45	51	64	70	95	47.4%
Asian	11	5	4	4	4	4	-61.5%
American Indian or Alaskan Native	9	5	11	13	18	19	97.8%
Native Hawaiian or Pacific Islander	3	2	4	2	2	0	NA
Two or More	22	26	36	55	60	85	294.3%
Non-Resident Alien	3	20	2	0	0	0	NA
Unknown	572	870	1157	991	946	655	14.7%

In the past five years, Washburn Tech seen an increase in male student enrollment (Table 5). With 658 male students in AY 2012 and 1,078 in AY 2017, Washburn Tech's male population increased 63.8 percent (KBOR, 2018). In comparison, during that same time female enrollees increased by 306 students (44.3%). Today, Washburn Tech there are 8 percent more males than females, but over past five years, on average the ratio male to female has been 50:50.

Table 5

Washburn Institute of Technology Enrollment by Gender -Academic Year 2012-2017

Gender	AY 2012	AY 2013	AY 2014	AY 2015	AY 2016	AY 2017	% Change AY 12-17
Female	690	784	971	878	945	996	44.3%
Male	658	766	906	1005	1055	1078	63.8%
Unknown	0	1	5	1	0	0	NA
Total	1348	1551	1882	1884	2000	2074	53.9%

Table 6 shows that from AY 2012-17 Washburn Tech enrollment has seen an increase in students of many ages. Significant increases can be seen in all Washburn Tech student age categories (KBOR, 2018). A large growth in early interest is observed in Washburn Tech enrollees still in high school. Since AY 2012, enrolled students aged 18 and under grew by 255

students (154%). Reflecting the study's targeted population, the institution saw a 63 percent increase in students aged 18-19, with 372 students in 2012 and 608 students in 2017. Washburn Tech also had a five-year upsurge in students aged 20-24 with 73 more students (24%) enrolled.

Table 6

Washburn Institute of Technology Enrollment by Age - Academic Year 2012-2017

Age	AY 2012	AY 2013	AY 2014	AY 2015	AY 2016	AY 2017	% Change AY 12-17
<18	166	236	311	339	368	421	154%
18-19	372	402	519	484	522	608	63%
20-24	309	364	384	399	382	382	24%
25-44	398	447	538	543	618	552	39%
45-64	102	99	128	117	110	106	3%
65+	1	2	2	2	2	4	208%

Washburn Tech student profile mirrors the state's CTE student profile (KBOR, 2018) about gender (Table 7), race/ethnicity (Table 8), and age (Table 9). This provides the opportunity for the study results to guide future research by providing a non-scientific description of how Kansas CTE student might have selected a technical post-secondary education.

Table 7

Kansas Technical Colleges Enrollment by Gender - AY 2012 - 2017

Gender	AY 2012	AY 2013	AY 2014	AY 2015	AY 2016	AY 2017	% Change AY 12-17
Female	5,388	5,956	6,213	6,167	6,533	6,945	28.90%
Male	4,998	5,451	6,010	6,385	6,635	7,092	41.90%
Unknown	92	33	35	14	2	5	- 94.6%
Total	10478	11440	12258	12566	13170	14042	34.00%

Table 8

Kansas Technical Colleges Enrollment by Race/Ethnicity - AY 2012-2017

Race/Ethnicity	AY 2012	AY 2013	AY 2014	AY 2015	AY 2016	AY 2017	% Change AY 12-17
White	64.10%	61.80%	59.40%	62.00%	62.40%	66.00%	38.10%
Hispanic	7.60%	9.00%	10.30%	10.30%	12.50%	13.30%	135.80%
Black or African-American	9.60%	9.40%	8.80%	7.50%	6.70%	6.70%	-6.40%
Asian	2.50%	2.50%	2.50%	2.70%	2.60%	2.30%	23.70%
American Indian or Alaskan Native	1.30%	1.20%	1.30%	1.10%	1.10%	0.90%	-6.40%
Native Hawaiian or Pacific Islander	0.20%	0.20%	0.30%	0.30%	0.20%	0.10%	0.00%
Two or More	0.30%	0.50%	0.60%	0.90%	0.90%	2.70%	1143.30%
Non-Resident Alien	0.10%	0.30%	0.10%	0.40%	1.00%	1.10%	957.10%
Unknown	14.30%	15.10%	16.70%	15.00%	12.60%	6.80%	-35.90%

Table 9

Kansas Technical Colleges Enrollment by Age - Academic Year 2012-2017

Age	AY 2012	AY 2013	AY 2014	AY 2015	AY 2016	AY 2017	% Change AY 12-17
<18	7.1%	10.7%	15.4%	19.0%	24.2%	25.5%	381.9%
18-19	15.4%	17.1%	20.7%	22.8%	25.3%	25.6%	122.8%
20-24	28.1%	26.1%	23.9%	22.0%	20.3%	20.2%	-3.8%
25-44	37.8%	35.7%	31.8%	28.8%	24.6%	23.2%	-17.7%
45-64	11.2%	10.0%	8.0%	7.0%	5.5%	5.3%	-36.8%
65+	0.4%	0.4%	0.3%	0.3%	0.2%	0.2%	-33.3%

NCES defines “full-time” and “part-time” students: a. A fulltime student is enrolled in 12 or more semester’s credits each term; and b. A part- time student is enrolled in less than 12 credits each term (IPEDS, 2017). In 2011, full-time to part-time Washburn Tech student status enrollment was approximately 50:50 (Table 10). By 2016 Washburn Tech reported at 40:60 ratio with 756 full-time compared to 1244 part-time students. This increase was largely contributed by the 106 (40.5%) more students under the age of 18, typically high school students, enrolled at Washburn Tech from AY 2011-2016 (KBOR, 2017).

Table 10

Washburn Institute of Technology Enrollment - Full vs Part-time - Academic Year 2012-2017

Student Status	AY 2012	AY 2013	AY 2014	AY 2015	AY 2016	AY 2017	% Change AY 12-17
Full-time	569	578	691	706	756	701	23.2%
Part-time	779	973	1191	1178	1244	1373	76.3%
Total	1348	1551	1882	1884	2000	2074	53.9%

In Fall 2016, Washburn Tech's credit hour production decreased 296 credit hours from the previous fall semester – a 1.7% decrease (Washburn, 2016). Table 11 illustrates Washburn Tech Student Credit Hours (SCH) by program for Fall 2016. Washburn Tech reported 16,748 SCH, a 1.7 percent decrease from the 17,044 SCH in Fall 2015. Five programs represent approximately 40-percent of Washburn Tech's Fall 2016 SCH census. The Automotive Service Technician Program generates the largest number of SCH (1,726), accounting for 10.9 percent of Washburn Tech's total SCH. Welding Technology (1,448 SCH), Computer Repair and Networking (1,313 SCH), Practical Nursing (1,162 SCH), and Health Care Technology (1,031 SCH) complete the top-five programs (Washburn University, 2016).

Table 11

Washburn Institute of Technology Credit Hours by Program Fall 2016

Program	Fall 2016	Percent of Total	Fall 2015	Change SCH	Change Percent
Advanced Systems Technology	667	4.0%	767	-100	-13.0%
Auto Collision	275	1.6%	565	-290	-51.3%
Automotive Service Technician	1,726	10.3%	1,869	-143	-7.7%
Building Technology	447	2.7%	742	-295	-39.8%
Business Bookkeeping & Accounting	316	1.9%	268	48	17.9%
Cabinet & Millwork	276	1.6%	384	-108	-28.1%
Certified Medication Aide [1]	100	0.6%	95	5	5.3%
Certified Nursing Aide [1]	385	2.3%	315	70	22.2%
Certified Logistics Technician	119	0.7%	n/a	n/a	n/a
Certified Production Technology	14	0.1%	461	-447	-97.0%
Climate & Energy Control Technologies	408	2.4%	405	3	0.7%
Commercial/Heavy Construction	313	1.9%	342	-29	-8.5%
Commercial Truck Driving	92	0.5%	n/a	n/a	n/a
Computer Repair & Networking	1,313	7.8%	1,118	195	17.4%
Cosmetology	317	1.9%	n/a	n/a	n/a
Culinary Arts	475	2.8%	526	-51	-9.7%
Diesel Technology	721	4.3%	752	-31	-4.1%
Early Childhood Professional	409	2.4%	407	2	0.5%
Electrical Technology	588	3.5%	718	-130	-18.1%
Emergency Communications - Dispatch	104	0.6%	n/a	n/a	n/a
Emergency Medical Technician (EMT)	300	1.8%	162	138	85.2%
Graphics Technology	478	2.9%	480	-2	-0.4%
Health Care Technology	1,031	6.2%	965	66	6.8%
Health Care Technology - Advanced	104	0.6%	78	26	33.3%
Heavy Diesel Construction Technology	331	2.0%	322	9	2.8%
Home Health Aide [1]	0	0.0%	10	-10	-100.0%
Legal Office Professional	208	1.2%	276	-68	-24.6%
Locomotive Diesel Technology	224	1.3%	319	-95	-29.8%
Machine Tool Technology	453	2.7%	377	76	20.2%
Medical Office Specialist	211	1.3%	264	-53	-20.1%
Office Careers Technology	127	0.8%	78	49	62.8%
Phlebotomy	248	1.5%	n/a	n/a	n/a
Practical Nursing	1,162	6.9%	1,282	-120	-9.4%
Surgical Technology	350	2.1%	264	86	32.6%
Technical Drafting	290	1.7%	334	-44	-13.2%
Welding Technology	1,448	8.6%	1,588	-140	-8.8%
Other					
Prerequisites - Health Fields [1]	354	2.1%	385	-31	-8.1%
Bridge Program	104	0.6%	52	52	100.0%
Independent Courses - Gen Eds, others	260	1.6%	74	186	251.4%
Washburn Tech Total	**16,748**	**100.0%**	**17,044**	**-296**	**-1.7%**

[1] Some programs and courses begin after the 20th day census and are not reflected in this table; therefore, total SCH at the end of the term will likely be higher than reflected at census

Source: Washburn University (2016). Washburn University Enrollment Report Fall 2016, Topeka, KS.

Washburn Tech reported an increase in credentials awarded. Between AY 2012-2017, most Washburn Tech's degrees/certificates conferred (Table 12) have been either short-term certificates, requiring less than 16 credit hours, or a technical certificate, requiring 45-59 credit hours (KBOR, 2018). The demonstrable demand for quick completion supports the study's investigation into the weight a certification program had on the sample's decision to attend Washburn Tech.

Table 12

Washburn Institute of Technology – Degree/Certificate Awarded – Academic Year 2012-17

Category	AY 2012	AY 2013	AY 2014	AY 2015	AY 2016	AY 2017	% Change AY 12 - 17
Short-Term Certificates (<16 Credit Hours)	486	591	798	695	643	686	**41.2%**
Technical Certificates- A (16-29 Credit Hours)	39	31	61	98	110	102	**161.5%**
Technical Certificates- B (30-44 Credit Hours)	7	16	27	20	62	53	**657.1%**
Technical Certificates- C (45-59 Credit Hours)	314	313	343	267	348	326	**3.8%**
Total	**846**	**951**	**1,229**	**1,080**	**1,163**	**1,167**	**37.9%**

Source: Kansas Board of Regents. (2018). Institutional Profile: Washburn Institute of Technology, Topeka, KS

Instrumentation

By analyzing previous quantitative studies on college choice (Brown, 2015; Cygan, 2014; Doerfel, 2003; Henry 2012; Shanklin, 2014; Suaphan, 2015), reviewing The College Board's Admitted Student Questionnaire ®, and considering feedback from my dissertation advisor and other practitioners, the study's descriptive survey questions were developed.

This study used an online Qualtrics survey to depict a student's decision to attend Washburn Tech. Aligned with the Hossler and Gallagher (1987) college choice model, the survey questions (Appendix B) were chosen to answer specific research questions. Because most Washburn Tech students are between 18 and 45, display logic and qualifier rules were inserted to assure questions aligned with student types. A mixture of partially categorized and close-ended questions is used.

Supporting the study's purpose, each question was assigned to four response categories: college aspirations, search processes, choice rationales, and respondent demographics. The responder's college aspirations prior to selecting Washburn Tech described their social resources and connections used towards their education. Answers related to the student's method of finding a post-secondary institution speak to the value of institutional recruitment, performance, and programs. Exploring the rationale behind a student's decision to attend Washburn Tech indicates the impact of specific institutional characteristics (e.g., affordability, class sizes, campus, academic programs, etc.) on a student's decision. The study compared the college choices of full-time and part-time students as well as non-traditional and traditional aged students. The data analysis is complimented by a demographic depiction of the respondents, providing context for any future research.

Procedures

In addition to a literature review, preparatory research was based on data from the Kansas Board of Regens (KBOR), Association for Career and Technical Education (ACTE), Integrated Postsecondary Education Data System (IPEDS), National Research Center for Career and Technical Education (NRCCTE), National Center for Education Statistics (NCES), Kansas State Department of Education (KSDE), United States Department of Education (DOE), Washburn University (WU) and Washburn Institute of Technology (Washburn Tech). This groundwork indicated the best way to tabulate the study participants' characteristics.

Upon receiving approval from the University of Kansas Institutional Review Board (IRB), Dr. Clayton Tatro, Washburn Tech's Associate Dean of Instruction Curriculum and Instruction Tech Administration, was contacted to plan my survey of Washburn Tech students. Students received an e-mail from Mr. Clark Coco, Dean of Washburn Tech, encouraging

participation. I wrote the message and served as the point of contact. Washburn Tech faculty and staff also mentioned the importance of the study to its students.

To address the research questions, a quantitative survey was used. University of Kansas Qualtrics Survey Software was used to administer the survey. This online survey was sent through the institution's official e-mail account to every full and part-time student, excluding enrolled high school students. A reminder e-mail with the survey link was sent once a week for five weeks. The survey closed on Friday, March 9, 2018. The selected period gave Washburn Tech students plenty of time to experience both courses and Washburn Tech.

Using an outside research and web-based survey protected Washburn Tech from any violation of the Family Educational Rights and Privacy Act (FERPA), protecting the students' privacy. Finally, students' anonymity ensured their candor.

Population and Sample

There are several reasons to target Washburn Tech students who completed their secondary education between 2013 and 2017. First, a student who graduated after 2012 would typically be 18-24 years of age. This age group allows for relevant literature comparisons because it aligns with the focal point of prior college choice studies (Bergerson, 2009; Bers & Galowich, 2002; Braddock et al., 2008; Cabrera & La Nasa, 2000; Confer & Mamiseishvili, 2012; Cygan, 2014; Hoyt & Brown, 2003; Palmer et al., 2004; Paulsen, 1990; Perna, 2006; Barbara K Townsend, 2003). The survey's target provides inclusion of an average 50% of Washburn Tech's student population reported between AY 2012-2017 (KBOR, 2018), which is a sizable population. Finally, a student, in theory, is exposed to more college choice influences and resources during their secondary education than any other time in their life. It was believed that participants would have a more facile and richer recall in describing their decision process to

attend Washburn Tech if it had been less than five years since the completion of their secondary education.

With the support of Washburn Tech's Associate Dean for Instruction, Dr. Clayton Tatro, 295 students were identified by Washburn Tech as potentially meeting the target population requirements. Washburn Tech's Dean, Mr. Clark Coco, on February 1, 2018, sent a personal e-mail to identified students, inviting them to fill out the Choosing Washburn Tech Survey. One student's e-mail returned as not being currently enrolled. After adjusting the distribution list, 294 students were sent unique and personalized follow-up e-mails from the researcher for five weeks.

Except for the first qualifying question, asking if they completed their high school education between 2013 and 2017, the survey didn't have any required questions. Students were able to pause and finish at any time. If a student's partially completed survey remained idle for four weeks, the survey was closed and submitted as final.

Initially on first review, seventy-two students participated. The data received was filtered to improve the quality of responses. Only one respondent was eliminated for not passing the first qualifying question, adjusting the final survey population to 293 ($N = 293$). The final sample data set was seventy-one ($n = 71$), representing twenty-five percent of Washburn Tech's traditional aged student population.

Data Analysis

The study used a descriptive method to analyze the data. It does not either provide a conclusion or explain a relationship between independent or dependent variables. Though Qualtrics survey provided the initial review, Microsoft Excel was the primary instrument.

Data cleansing, the process of detecting and correcting inaccurate records, was the first step in my analysis. This involved reviewing approximately 5330 data cells from 120 variables.

The primary filter for cleaning the data was variable which asked what year the participant completed their high school education. Answers that fell outside the targeted 2013-2017 range were eliminated.

Once the data was cleansed, the next step was separate variables into their own Excel worksheet. Worksheets were labeled by their variable name (e.g., 3.3 HS diploma or GED, 6.3 # of Colleges Applied, etc.). Pivot tables were used to analysis the variable data, identifying appropriate statistical findings (e.g., means, frequencies, modes, standard deviations, etc.). The results were used to create the study's descriptive tables.

Data analysis was an extensive process. A work log was kept recording the time spent analyzing the results. Overall, approximately 70 hours spread over three months was spent to assure data integrity and accuracy.

Summary

This chapter described the research design and methodology used by this quantitative study. Analysis will provide descriptive data from the online survey of Washburn Institute of Technology's traditional aged students. Hossler and Gallagher (1987) college choice model was the study's framework in design the survey.

The goal of the study was to describe the college choice process of traditional aged Washburn Tech students. Providing some insight and useful information for Washburn Tech stakeholders (e.g., administrators; faculty; government officials; etc.), data analysis answered several questions: Prior to completing their secondary education, did the students consider other options than attending college?; How much did Washburn Tech's affordability play in their student's decision to attend?; Was student body diversity a consideration in researching colleges?; and Did Washburn Tech's marketing influence students to attend?

CHAPTER FOUR: RESULTS

Introduction

Exploring the college choice process of Kansas Career Technical Education students (CTE students) is a unique opportunity. The purpose of this study is to describe the college choice process of traditional aged full and part-time CTE students at Washburn Institute of Technology (Washburn Tech), Topeka, KS, during 2018. A forty-six-question, descriptive survey was developed to assess the targeted population's college aspirations, search methods, and choice process. The objective was to explore the three stages of Hossler and Gallagher's (1987) college choice model (predisposition, search, and choice) as it relates to the study's primary research question: "How did Washburn Institute of Technology students navigate the college choice process?"

This chapter presents the results of the descriptive survey by describing the sample including response rate, characteristics, and academic success. The description is followed by data from the three-stage college choice model. The chapter concludes with a general summary of descriptive outcomes.

Sample Size Description

At any time, the sample's seventy-one students could have responded to the survey. Usable data varied per question. On average, fifty traditional aged students answered each question. Table 13 describes the target population's demographics and financial needs. Secondary education academic performance and background is presented in Table 14. The participant's prior and current post-secondary results are illustrated in Table 15. In addition to providing a specific review of each category, this section also explains how the sample set mirrors the study's target population at Washburn Tech.

Table 13

Sample size - demographics and financial needs

Variables	N	%	M	SD	Median	Max	Min
Gender	51						
Male	26	51%					
Female	24	47%					
Other	1	2%					
Race/Ethnicity	51						
White	43	84%					
African American	3	6%					
Native American	2	4%					
Other	3	6%					
Age	50		21	2.47	21	36	19
Employment	50						
Full-time	9	18%					
Part-time	26	52%					
Unemployed	15	30%					
Martial Status	50						
Single	43	86%					
Married	7	14%					
Do you have any children?	50						
Yes	5	10%					
No	45	90%					
Residence	49						
Kansas	45	92%					
Out of State	4	8%					
Does at least one parent have a college degree?	51						
Yes	30	59%					
No	21	41%					
Receiving Federal or State Aid	51						
Yes	35	69%					
No	16	31%					
Eligible - Federal Pell Grant	35						
Yes	26	74%					
No	9	26%					

Table 14

Sample size – secondary education

Variables	N	%	M	SD	Median	Max
High School Graduation Year	65		2016	1.33	2016	2017
Secondary credential earned	65					
HS Diploma (1) and year	58	89%	2016	1.24	2016	
GED (2) and year	7	11%	2014	1.38	2014	2016
High School GPA	58		3.5-3.9	1.05		
ACT Exam	65					
Yes	42	65%				
No	17	26%				
Don't Know	6	9%				
ACT Composite Score	42		23	4.30	23	32
Technical College Credit Earned	61					
Yes	20	33%				
No	41	67%				
Technical College Attended	20					
Washburn Institute of Technology	10	50%				
Highland Community College	5	25%				
Allen Community College	1	5%				
Flint Hills Technical College	1	5%				
Johnson County Community College	1	5%				
Neosho County Community College	1	5%				
Southeast Community College *	1	5%				
Earned Technical Credential	20					
Yes	8	40%				
No	11	55%				
Don't Know	1	5%				
State of Kansas Pay for Technical Credit	19					
Yes	15	79%				
No	3	16%				
Don't Know	1	5%				

* Southeast Community College is in Lincoln, NE.

Table 15

Sample size – post-secondary education

Variables	N	%
Prior to Washburn Tech		
Enrolled in another college	59	
Yes	27	46%
No	32	54%
Type of institution enrolled	28	
2-year Community College (1)	14	50%
4-year University (2)	14	50%
Earned an Associates degree	27	
Yes	4	15%
No	23	85%
Current Washburn Tech Status		
Enrolled - Full-time or Part-time	51	
Full-time (FT)	26	51%
Part-time (PT)	25	49%

Demographics

Students responded to eight general demographic questions: age, gender, ethnicity, employment, financial needs, marital status, children, and hometown the following are the results for each category.

Year of birth and age. Fifty students provided their age by identifying their birth year (Table 16). The mean was 1997 (SD = 2.5). Configuring data to student age, the mean age was 21 with a maximum age of 36 and minimum age of 19. Furthermore, average age similarities are found in both the sample set and the study's Washburn Tech target data source (Table 17).

Table 16

Sample size – age count

Variables	N	%	M	SD	Median	Max	Min
Age	50		21	2.47	21	36	19
19	6	12%					
20	15	30%					
21	16	32%					
22	6	12%					
23	5	10%					
24	1	2%					
36	1	2%					

Table 17

Sample size to Washburn Tech comparison – average age

	N	M
WU Tech	382	22
Survey Sample	50	21

Gender and race/ethnicity. Students were asked to share their gender and race/ethnicity. The following tables illustrate how their responses represent Washburn Tech's overall student population. Fifty-one respondents identified their gender (Table 18) as either "male," "female," or "other." Male students (n = 26) slightly outnumbered females (n = 24). One respondent identified their gender as other. There were fifty-one respondents who specified their race/ethnicity (Table 19). Forty-three students (84%) identified as being "White." Three students (6%) answered "Black/African American." Four percent selected "Native American/American Indian" (n = 2) and three students (6%) stated "Other." None of the respondents identified as either "Hispanic/Latino" or "Asian/Pacific Islander."

Table 18

Sample size to Washburn Tech comparison - gender

		1 Female		2 Male		3 Unknown	
	N	*n*	%	*n*	%	*n*	%
WU Tech	2074	996	48%	1078	52%	0	NA
Survey	51	24	47%	26	51%	1	2%

Table 17

Sample size to Washburn Tech comparison – race/ethnicity

		1 White		2 Black		3 Native American		4 Other	
	N	*n*	%	*n*	%	*n*	%	*n*	%
WU Tech	1417	1033	73%	95	7%	19	1%	270	19%
Survey	51	43	84%	3	6%	2	4%	3	6%

Financial aid. An important descriptor of socio-economic status is an individual's financial need. Students were asked to identify their financial needs by answering if they were receiving either federal or state financial aid. Furthermore, those receiving federal aid were also asked if they were eligible to receive a Federal Pell Grant. Of the fifty-one responses, thirty-five students (69%) answered that they were receiving either federal or state aid. Sixteen responded (31%) stating that they were not receiving any federal or state financial assistance. The students who were receiving federal financial aid were asked to identify if they were eligible for a Federal Pell Grant. Thirty-five Washburn Tech students responded. Twenty-six students (74%) said they were eligible for a Federal Pell Grant. Nine students stated that they were not eligible.

Employment. Fifty students described their employment status being either full-time, part-time, or unemployed. Of the fifty student responses, twenty-six (52%) stated they worked part-time, fifteen (30%) responded as being unemployed, and only nine (18%) claimed full-time employment.

Marital and family status. Forty-three (86%) of the responses (*n = 50)* responded as being single and seven (14%) replied as being married. Forty-five (90%) of fifty students stated they did not have any children. Five (10%) answered that they did have children.

Hometown. The survey asked for respondents to identify the zip code of their hometown. Forty-five of the respondents (*n* = 49) acknowledged Kansas as their state of origin (92%). Of the forty-five Kansas residents, all were from Northeast Kansas. Table 20 provides a break-down of participant's hometowns. The largest group of students, representing forty-seven percent (*n* = 23), were from Topeka, KS. This matches Washburn University's reporting (2008) that Topeka, KS and other Shawnee county cities have been strong markets for students.

Education. The survey asked students several questions describing their academic background in four areas: parental education, secondary education performance; prior post-secondary education; and current Washburn Tech status and program.

Parental education. Students were asked whether either of their parents *had* earn*ed* a college degree. Fifty-one students answered the question. Thirty students (59%) stated that at least one parent earned a college degree. Twenty-one students (41%) said that neither parent had a college degree.

Secondary education. The admissions process for Washburn Institute of Technology requires official secondary school records. The survey asked students to identify their performance in the following secondary areas: degree completion; GPA and ACT) scores; technical institution courses; and state assistance. Of the sixty-five students who answered questions about completing their secondary education (Table 21), twenty-two respondents (34%)

Table 20

Secondary education completion

Variables	N	%	M	SD	Median	Max	Min
High School Graduation Year	65		2016	1.33	2016	2017	2013
2013	7	11%					
2014	6	9%					
2015	14	22%					
2016	16	25%					
2017	22	34%					
Secondary credential earned	65						
HS Diploma (1) and year	58	89%	2016	1.24	2016		
2013	4	6%					
2014	5	8%					
2015	13	20%					
2016	14	22%					
2017	22	34%					
GED (2) and year	7	11%	2014	1.38	2014	2016	2013
2013	3	5%					
2014	1	2%					
2015	1	2%					
2016	2	3%					

completed their high school education in 2017. Fifty-eight students (89%) completed their high school diploma. The remaining seven students finished a General Equivalency Diploma (GED).

High school GPA and ACT. Students were asked to share their high school grade point average (GPA) and ACT composite score (Table 22). Of the fifty-eight respondents who completed a high school diploma, all but two disclosed the range of their GPA. Eighty-four percent of the respondents (n = 49) stated they had above a 3.0 GPA. The highest percentage of

students (47%) marked the 3.5-3.9 GPA range. The average and median GPA's were also 3.5-3.9.

Of the sixty-five students who completed either a high school diploma or GED, forty-two (65%) indicated they took the ACT. Seventeen (26%) stated they hadn't. Six (9%) either left the answer blank or did not know. There were four GED students who took the ACT, but none of them could recall their overall ACT composite score. Of the thirty-eight high school graduates who took the ACT, twenty-six (68%) gave their ACT composite score. The range was 18-32; the average was 23.

Table 21

Sample – high school GPA and ACT composite

Variables	N	%	M	SD	Median	Max	Min
High School GPA	58		3.5-3.9	1.05			
4.0	7	12%					
3.5-3.9	27	47%					
3.0-3.4	15	26%					
2.5-2.9	6	10%					
Below 2.5	1	2%					
Don't know	2	3%					
ACT Exam	65						
Yes	42	65%					
No	17	26%					
Don't Know	6	9%					
ACT Composite Score	42		23	4.30	23	32	18

Technical institution courses and state assistance. Sixty-one students indicated whether they took any technical college courses before completing their high school education. Forty-one (67%) did not take any technical courses during high school. Table 23 identifies the two-year technical colleges attended by twenty respondents (43%) during their secondary education. A total of ten students (16%) took technical courses at Washburn Tech. Highland Community College (HCCC), Highland, KS was the second most attended institution with a total of five students (8%). There was one student who attended HCCC but stated they did not take any

technical courses. Allen Community College, Johnson County Community College, Neosho County Community College, and Southeast Community College (Lincoln, NE) each had one student.

Of the twenty respondents who enrolled in a technical course prior to completing their high school education, fifteen students (75%) had at least one course paid by the State of Kansas. In addition, eight of the twenty students (40%) earned a technical credential such as degree, certificate, or licensure.

Table 22

Sample - technical colleges attended during secondary education

Variables	N	%
Technical College Attended	20	
Washburn Institute of Technology	10	50%
Highland Community College	5	25%
Allen Community College	1	5%
Flint Hills Technical College	1	5%
Johnson County Community College	1	5%
Neosho County Community College	1	5%
Southeast Community College *	1	5%

* Southeast Community College is in Lincoln, NE.

Postsecondary education. To establish an understanding of the survey sample's education since completing high school, the survey asked students to describe their prior college education and current Washburn Tech status.

Prior college education. Fifty-nine students told whether they attended another college between high school and Washburn Tech. Fifty-four percent (n = 32) stated Washburn Tech was their first institution. The other twenty-seven respondents attended twenty-eight institutions. Only four of the twenty-seven students completed a degree prior to Washburn Tech. Three

students completed an associate degree at a two-year community college. One student completed an associate degree at a four-year institution.

Washburn Tech student status. Fifty-one respondents shared whether they were enrolled either full-time (n = 26) or part-time (n = 25). Table 24 illustrates respondents' academic programs by full-time and part-time status. Overall, twenty-one Washburn Tech programs were recognized as respondents' academic interests. The top three programs selected were computer repair and networking (n = 7), practical nursing (n = 6), and graphics technology (n = 5).

Table 23

Sample - current academic programs (full-time/part-time)

		Full-Time		Part-Time	
Variable	N	*n*	%	*n*	%
Enrollment Status	51	26	51%	25	49%
Washburn Tech Programs					
Advanced Systems Tech.	2	0	0%	2	100%
Auto Service Tech.	1	1	100%	0	0%
Building Tech.	1	1	100%	0	0%
Business Bookkeeping and Acctg	2	0	0%	2	100%
Climate and Energy Control Tech.	2	0	0%	2	100%
Commercial and Heavy Construction	2	1	50%	1	50%
Computer Repair and Networking	7	4	57%	3	43%
Cosmetology	1	1	100%	0	0%
Culinary Arts	2	2	100%	0	0%
Diesel Tech.	1	1	100%	0	0%
Early Childhood	2	0	0%	2	100%
Emergency Medical Technician	1	0	0%	1	100%
Graphics Tech.	5	1	20%	4	80%
Heavy Diesel Construction Tech.	4	1	25%	3	75%
Legal Office Professional	3	3	100%	0	0%
Machine Tool Tech.	3	3	100%	0	0%
Medical Office Specialist	2	0	0%	2	100%
Practical Nursing	6	5	83%	1	17%
Surgical Tech.	1	1	100%	0	0%
Technical Drafting	1	1	100%	0	0%
Welding	1	0	0%	1	100%
Undecided	1	0	0%	1	100%
Total Programs	51	26	51%	25	49%

Washburn Tech does serve some unique students, but overall, the sample set does share commonalities with the study's target market dataset. It also described participants as academically capable, performing well during their secondary education. Their academic profile informs the next section, which explores more of the participants' reasons for attending Washburn Tech.

College Choice Process

Framed by the three-stages of Hossler and Gallagher's (1987) college choice model—student predisposition, search process, and choice—the survey results illuminate the primary research question for this study: "How did Washburn Institute of Technology students navigate the college choice process?"

Predisposition - College Aspiration

Approximately sixty students answered three specific questions characterizing their aspirations for a college education. This portion describes students' earliest memories of deciding to go to college, beliefs on either their college or post-high school career path, and financial savings for college. Each subject is explored further in the remainder of this section.

Pursuing college. Fifty-nine students remembered at what age they decided to pursue a college education. The average age was fourteen-years-old. One student reported knowing from birth they were going to college. Two students responded that their decision was made as early as five years of age. The oldest age shared was twenty-two. Explained more in the next chapter, these results align with Hossler and Gallagher's (1987) conclusion that deciding to go to college occurs in the eighth grade.

Beliefs on college or career paths post high school. Students were asked to reflect on if they considered joining the military, entering the workforce, and going to college prior to their secondary education. Of fifty-eight respondents, fifty-five shared their opinion about joining the armed forces after college. Seventy-six percent (n = 44) did not consider joining the military. Eleven students (19%) did consider signing up. Three students of the fifty-eight respondents did not answer. Like the question about "joining the military," only fifty-five students shared whether they considered entering the workforce after high school. Unlike the "military" question,

most of the respondents (*n* = 45; 78%) did consider entering the job market after high school. Fifty-eight students answered if they deliberated entering college after high school. Ninety percent of the respondents (*n* = 52) marked that they did plan to attend a post-secondary institution after completing their secondary education.

College savings. The college choice process precipitates changes in a family's financial priorities (Hitchcock, 2008). Students were asked if they saved money to attend college. Of the fifty-two students who answered the question, twenty-eight (53%) marked that they saved for college, revealing that most of the participants recognized the importance of being financially prepared for college. Their efforts to save money represented their desire for a post-secondary education.

Search Process

At least fifty-five students responded to three questions related to their college search process. The survey asked for students to share the number of institutions they considered and what features of a college were most important to them.

Number of colleges considered. Of the fifty-six students who answered, the average number of colleges considered during their search was 3.3. As shown in Table 25, most students considered at least one to three colleges

Table 24

Sample – number colleges considered

Variable	N	%	M	SD	Max	Min	Median
How many colleges did you consider during your search process?	56		3.30	3	20	0	4.50
0	4	7%					
1	7	13%					
2	11	20%					
3	19	34%					
4	3	5%					
5	6	11%					
6	3	5%					
8	1	2%					
10	1	2%					
20	1	2%					

Exploring college options. Fifty-six respondents affirmed the importance (Table 26) of the following ten college characteristics: graduation rate, job placement after graduating, cost of attendance, ease of admissions policy and process, academic reputation, financial aid, faculty and course offerings, academic program(s), and institution type (two or four year).

Overall, every characteristic scored with some degree of importance to the respondent's search process. "Job placement after graduating" was the most important aspect of college with ninety-six percent (n = 54) of the respondents selecting either "very important" or "important." The second most important college search feature was "cost to attend the institution" with fifty

students (89%) marking at least "important" or above. The least important feature was whether an institution was "four-year" or "two-year."

Table 25

Search process – important of college characteristics (N = 56)

					4 -Very Important		3 -Important		2 - Somewhat Important		1 - Not Important	
	Variable	M	SD	Median	*n*	%	*n*	%	*n*	%	*n*	%
1	Job placement after graduating	3.77	0.43	4.0	41	73%	13	23%	0	0%	2	4%
2	Cost to attend the institution	3.50	0.67	4.0	32	57%	18	32%	3	5%	3	5%
3	Faculty and course offerings	3.36	0.66	3.0	20	36%	29	52%	6	11%	1	2%
4	Academic reputation	3.32	0.65	3.0	18	32%	29	52%	7	13%	2	4%
5	Offered academic program(s)	3.32	0.95	4.0	25	45%	22	39%	6	11%	3	5%
6	Percentage of students who graduate	3.32	0.99	4.0	24	43%	18	32%	8	14%	6	11%
7	Ease of admissions policy and process	3.14	0.89	3.0	14	25%	25	45%	14	25%	3	5%
8	Financial aid assistance	3.05	1.00	3.0	19	34%	21	38%	9	16%	7	13%
9	Four-year institution	2.36	1.14	2.0	10	18%	15	27%	13	23%	18	32%
10	Two-year institution	2.32	1.13	2.0	12	21%	20	36%	10	18%	14	25%

Note: N = 56; Ranking is based on mean (M) and then standard of deviation (SD)

College Choice

The final stage of Hossler and Gallagher's (1987) college choice model is the student making their college decision. This requires weighing each university's merits against their decision criteria. The survey had three sections asking respondents to describe why they chose Washburn Tech: applications and acceptance to other colleges, common college choice influences, and choosing Washburn Tech. The following provides results of responses received, describing influences on the student's choice to attend Washburn Tech.

Applications and acceptances to other colleges. Students were asked to share admissions decisions from other colleges. The following separates results by applications and admission decisions. There were forty-nine students who shared whether they applied to an institution other than Washburn Tech. Sixty-three percent (n = 31) did apply to at least one other college. Students selected an average of two other institutions.

Admission decisions. Though a student may have already selected an institution to attend, their final choice hinges directly on acceptance to it, making the admission decision the most important college choice criteria. If a student stated they applied to at least one other college, they were asked to share the institution name(s) and acceptance result(s). Of the thirty-one students who applied to another institution, twenty-six students, representing sixty-four individual admission decisions shared their college acceptance results. Table 27 illustrates admission decisions by institution types. On average, students did not have an issue being accepted by another institution, regardless of its type.

Table 26

Non-Washburn Tech admissions decisions

			1 -Yes		2 - No	
Variable	N	%	*n*	%	*n*	%
Total Decisions	64		58	91%	6	9%
Institution Type						
2-Year	21	33%	19	90%	2	10%
4-year	43	67%	39	91%	4	9%
Private	11	17%	10	91%	1	9%
Public	53	83%	48	91%	5	9%
In-State	52	81%	48	92%	4	8%
Out-of-State	12	19%	10	83%	2	17%

Common college choice influences. The survey asked students to rate the importance that eighteen variables had on their college decisions (Table 28). Approximately fifty-three students answered. Respondents' mean and standard deviation importance scores (i.e., 4 – Extremely important, 3 – Important, 2 – Somewhat important, and 1 – Not at all important) were used to rank the importance of each variable. Academic programs and post-graduation job prospects were the most important factors in selecting an institution, with at least fifty-six percent of the fifty-three students citing them as extremely important. At least forty-three students rated future financial security, cost of attendance, and family encouragement as important to extremely important. Participants felt their peers and prohibitive costs influenced their college choice the least.

Choosing Washburn Tech.

Ultimately, this study is about describing how and why the sample decided to attend Washburn Tech. In this final section, survey results are shared from three questions: How did students learn about Washburn Tech? Why did they decide to attend Washburn Tech? How satisfied are they with choosing Washburn Tech?

Table 27

Common influences when deciding on a college

	Variable*	N	M	SD	Median	4 - Extremely important		3 - Important		2 - Somewhat important		1 - Not at all important	
						n	%	*n*	%	*n*	%	*n*	%
1	Desired program	53	3.51	0.61	4.00	30	56.6%	20	37.7%	3	5.7%	0	0.0%
2	Secure a good job	52	3.46	0.67	4.00	29	55.8%	18	34.6%	5	9.6%	0	0.0%
3	To secure my financial future	53	3.30	0.70	3.00	23	43.4%	23	43.4%	7	13.2%	0	0.0%
4	Cost to attend	53	3.21	0.88	3.00	24	45.3%	19	35.8%	7	13.2%	3	5.7%
5	My family's encouragement	53	3.15	0.89	3.00	21	39.6%	23	43.4%	5	9.4%	4	7.5%
6	Offered financial assistance	53	2.98	0.95	3.00	18	34.0%	21	39.6%	9	17.0%	5	9.4%
7	Institution's academic reputation	53	2.89	0.85	3.00	12	22.6%	27	50.9%	10	18.9%	4	7.5%
8	Washburn Tech faculty/staff	53	2.77	1.01	3.00	16	30.2%	15	28.3%	16	30.2%	6	11.3%
9	Institution class size	53	2.66	1.04	3.00	13	24.5%	18	34.0%	13	24.5%	9	17.0%
10	I wanted to live near home	53	2.64	1.18	3.00	16	30.2%	16	30.2%	7	13.2%	14	26.4%
11	Assoc.deg. program with Washburn Univ.	52	2.58	1.05	3.00	11	21.2%	19	36.5%	11	21.2%	11	21.2%
12	A prior educator advised me	53	2.53	1.01	3.00	9	17.0%	21	39.6%	12	22.6%	11	20.8%
12	A visit to this campus	53	2.53	0.93	3.00	7	13.2%	23	43.4%	14	26.4%	9	17.0%
14	To advance in my current job	53	2.51	1.15	3.00	12	22.6%	19	35.8%	6	11.3%	16	30.2%
15	An early action/high school program(s)	53	2.15	1.03	2.00	5	9.4%	17	32.1%	12	22.6%	19	35.8%
16	To retain my current job	53	2.11	1.12	2.00	6	11.3%	18	34.0%	5	9.4%	24	45.3%
17	Could not afford first choice	53	1.83	0.99	1.00	3	5.7%	13	24.5%	9	17.0%	28	52.8%
18	Peers were attending	53	1.72	0.97	1.00	3	5.7%	10	18.9%	9	17.0%	31	58.5%

* Ranked based on mean (M) and standard deviation (SD)

Learned about Washburn Tech. Students shared whether seven sources of information were used during their process in learning about Washburn Tech. Of the responses received, (Table 29) friends (n = 30) were the leading source of information about Washburn Tech. Teachers/counselors (*n* = 25), online/searches (*n* = 23), and family members (*n* = 23) were also popular sources. Social media websites (*n* = 25), college fairs (*n* = 28), and employers (*n* = 30) were marked as the least used method for learning about Washburn Tech.

Table 28

Learning about Washburn Tech

			1-Yes		2-No	
	Variables	N	*n*	%	*n*	%
1	Friends	43	30	70%	13	30%
2	Online search engines	40	23	58%	17	43%
3	Family members	39	22	56%	17	44%
4	Teacher/Counselor	45	25	56%	20	44%
5	Social media websites	37	12	32%	25	68%
6	College fair	38	10	26%	28	74%
7	Employer	39	9	23%	30	77%

Decided to attend Washburn Tech. To explain their decision to attend Washburn Tech, students were asked whether they agree that any of the ten reasons had played a role: accepting student body, affordable tuition, ideal class sizes, enjoyable campus visit, friend(s) attending, knowledgeable faculty, helpful staff, advice from a teacher/guidance counselor, desired academic program, and persuasive marketing. They were also encouraged to share any other reason(s). Of responses received (Table 30), desired academic programs and affordable tuition were the top two reasons for choosing Washburn Tech. These were followed by Washburn Tech having helpful staff, enjoyable campus visit, and knowledgeable faculty. Persuasive marketing and friends attending were the bottom variables justifying their choice to attend Washburn Tech.

Of the twenty-one students who marked “other” only four (5%) shared that “ease of finding job after completing course,” “family member’s experience,” “scholarship for the class,” and “no debt instead of four-year college” were reasons to attend Washburn Tech.

Post-decision satisfaction. Students were asked to describe either any regrets or dissatisfaction with Washburn Tech. Respondents rated their agreement with four descriptive statements: “I am satisfied with my decision to attend Washburn Tech.”; “If I was to do it over, I would choose to attend Washburn Tech.”; “I will successfully complete my program.”; and “I plan to continue to earn a higher secondary degree (e.g., associates; bachelors; etc.).” Results shared in Table 31 describe students who are satisfied with their choice to attend Washburn Tech. They are confident they will complete their program, and if they were asked to make the college decision over again, they would still choose Washburn Tech.

Table 30

Reasons for deciding to attend Washburn Tech

						7 Strongly Agree		6 Agree		5 Somewhat Agree		4 Neither		3 Somewhat Disagree		2 Disagree		1 Strongly Disagree	
	Variable*	N	M	SD	Median	*n*	%	*n*	%	*n*	%	*n*	%	*n*	%	*n*	%	*n*	%
1	A desired academic program	50	5.80	1.60	6.00	19	38%	21	42%	2	4%	4	8%	0	0%	1	2%	3	6%
2	Affordable tuition	50	5.48	1.61	6.00	16	32%	15	30%	6	12%	9	18%	0	0%	2	4%	2	4%
3	Helpful staff	50	5.02	1.55	5.00	6	12%	18	36%	10	20%	10	20%	2	4%	1	2%	3	6%
4	Enjoyable campus visit	50	5.00	1.54	5.00	8	16%	15	30%	6	12%	17	34%	1	2%	0	0%	3	6%
5	Knowledgeable faculty	50	4.92	1.64	5.00	7	14%	15	30%	11	22%	10	20%	1	2%	3	6%	3	6%
6	Ideal class sizes	50	4.82	1.62	5.00	7	14%	12	24%	12	24%	12	24%	1	2%	3	6%	3	6%
7	Teacher/guid. couns. advice	50	4.40	1.67	4.00	6	12%	9	18%	4	8%	22	44%	2	4%	3	6%	4	8%
8	Accepting student body	50	4.18	1.65	4.00	4	8%	7	14%	8	16%	20	40%	2	4%	4	8%	5	10%
9	Persuasive marketing	47	3.91	1.60	4.00	4	9%	5	11%	2	4%	21	45%	5	11%	7	15%	3	6%
10	My friend(s) attending	49	3.67	1.78	4.00	3	6%	5	10%	6	12%	18	37%	1	2%	8	16%	8	16%
11	Other:	21	4.90	1.34	4.00	5	24%	2	10%	0	0%	14	67%	0	0%	0	0%	0	0%

* Ranked based on mean (M) and standard deviation (SD)

Table 29

Sample - satisfaction with Washburn Tech

						7 Strongly Agree		6 Agree		5 Somewhat Agree		4 Neither		3 Somewhat Disagree		2 Disagree		1 Strongly Disagree	
	Variable*	N	M	SD	Median	n	%	n	%	n	%	n	%	n	%	n	%	n	%
1	If I was to do it over, I would choose Washburn Tech.	51	5.47	1.9	6.00	18	35%	18	35%	5	10%	2	4%	2	4%	0	0%	6	12%
2	I plan to continue to earn a higher post-secondary degree.	51	5.57	1.7	6.00	23	45%	9	18%	4	8%	9	18%	2	4%	3	6%	1	2%
3	I am satisfied with my decision to attend Washburn Tech.	51	5.84	1.7	6.00	24	47%	16	31%	3	6%	1	2%	3	6%	2	4%	2	4%
4	I will successfully complete my program.	51	6.41	1.3	7.00	35	69%	12	24%	0	0%	2	4%	0	0%	0	0%	2	4%

* Ranked based on mean (M) and standard deviation (SD)

Summary

This chapter uses the results of a survey of traditional aged Washburn Tech students to describe their college choice process. It began with a description of the participants, including their individual demographics, families, employment, and academic history. As shared in the methodology chapter, Washburn Tech students are diverse and academically capable, self-reporting an average 3.5-3.9 GPA and 23 ACTS. Descriptive findings also showed most respondents came from households with at least one parent having a college degree. Washburn Tech was their first post-secondary institution after completing their secondary education.

Hossler and Gallagher's (1987) three stage model of predisposition, search, and choice was used to answer the study's research questions. The chapter presented survey responses in sections aligned to the three stages. This created a map of the participant's college choice process. Overall, the data was consistent with Hossler and Gallagher's finding of any traditional age students. The sample students decided around eighth grade to pursue college and felt strongly that they would either attend college or join the workforce after high school. The survey results illustrate that participants considered numerous criteria in deciding where to apply. Most students explored at least three post-secondary institutions. Job placement after graduating was the most important consideration; whether an institution was four-year or two-year was the least.

The college choice data presented in the chapter's final section revealed that attending Washburn Tech was not predetermined. Approximately two-thirds of the respondents applied to at least one other postsecondary institution. In the end, participants chose Washburn Tech because it had their desired academic programs and affordable tuition. Results also illustrated students were satisfied with their college choice and confident they would successfully complete their program.

CHAPTER FIVE: DISCUSSION

The study described the college choice process of Spring 2018 traditional aged Washburn Tech enrollees who completed high school/secondary education between 2013 and 2017. Fifty Washburn Tech students, on average, participated in the descriptive survey. The survey was designed to explore the three stages of Hossler and Gallagher's (1987) college choice model (i.e., predisposition, search, and choice) as it relates to the study's primary research question: "How did Washburn Institute of Technology students navigate the college choice process?"

This final chapter discusses the study's results, connecting findings to applicable college choice literature. Information is shared in six sections: discussion of findings, major conclusions, limitations of the study, implications of the study, recommendation for further research, and conclusion. In the end, results will show the study accomplished its purpose, filling a need in college choice research.

Discussion of Findings

Study results provide an insightful picture of twenty-five percent of Washburn Tech's traditional aged students and their college choice process. Analysis of the data both supported and complemented previously literature. This section discusses the study's participants' descriptive characteristics (e.g., demographics, sociographies, geographies, etc.), aligning results with prior CTE Student findings. The section concludes with describing respondents' selection process using the three stages of Hossler and Gallagher's (1987) college choice model.

Descriptive Participants Characteristics.

As addressed in chapter two, scholars present mixed reviews about CTE students in relationship to their academic motivation, retention, and execution. Overall, survey analysis supported prior CTE student research. In addition, unique findings were also discovered. There

are two-sets of analyses to discuss. The first considers the target population response rate. The second explores survey findings which align with prior CTE literature. By addressing these topics, a justification of how the study's sample supports the major conclusions is established.

Survey response rate. A study's validity and usefulness are only as strong as its target population's participation. In statistical terms, this is measured by a survey's response rate. With less than a ten percent response rate, the data sample only partially reflects the approximate three hundred student targeted population. Prior research on college survey response rates help explain the study's limited return. Sax, Gilmartin, and Bryant (2003), using data collected as part of a national survey of first-year college students, discovered that web-only survey methods, like the one used for this study, produces less overall response rates than paper surveys. This can be justified by the number of survey questions, interviewer authority, computer access, confidentiality assurance, technical understand, ethnicity, gender, family characteristics, affluence, and social validation – beliefs and attitudes from others (Groves, Cialdini, Couper, 1992; Sax et al., 2003). Sax et al. (2003) cited literature showing younger, affluent, white males are more likely to fill out web or paper survey.

Literature aligned findings. Survey participants showed both eagerness and willingness to grow their economic human capital through post-secondary education. Of the twenty respondents who enrolled in a technical course prior to completing their high school education, fifteen students (75%) had at least one course paid by the State of Kansas. This finding shows, at least for these respondents, the awareness of Kansas's program to increase CTE participation through financial assistance. It demonstrates the potential that this sample of CTE students are both resourceful and motivated in pursuing a CTE program. This contrasts in part with the prior literature presented in Chapter Two which stated the view vocational institutions as being lower

in quality and not desirable by learners (Dare, 2006; Deluca et al., 2006; Lichtenberger, 2004; Moodie, 2009; Packard, Leach, Ruiz, Nelson, & DiCocco, 2012; Roksa, 2006).

Study results showed that respondents' motivation differed from prior research shared in Chapter Two that CTE students were interested more in job placement than academics. Fifty-four (96%) of the fifty-six participants demonstrated that job placement after graduation was very important in finding and selecting a college. In addition, securing their financial future was also important having been selected by twenty-six (87%) out of fifty-three students. However, participants also rated faculty, academic reputation, and academic programs as highly important in both their college search and choice process. It demonstrates that the sample was also interested in the academic quality of their post-secondary pathway

In relation to prior CTE student literature, it appears that overall the study's sample provided both supportive and complementary findings. Survey data analysis showed that testers on average made their decision to pursue college by the eighth grade, providing an opportunity to academically prepare for post-secondary education. Respondents showed signs of having low-income, but they did not demonstrate being a first-generational college student. Finally, these Washburn Tech students showed that they were motivated by completing an academically strong program that led to a good career with financial stability. The next portion will answer the study's examination of respondents' thoughts about going to college, the research students used in pursuing a postsecondary education, and their reasons for enrolling at Washburn Tech.

Participants' College Choice Process

To describe and comprehend the college choice process of Washburn Tech students, the study used the three-stages of Hossler and Gallagher's (1987) college choice model: (i.e., predisposition, search, and choice) as its framework. Survey results answered specific secondary

research questions: 1. (Predisposition) How did students at Washburn Tech begin to think about going to college? When and how did the idea of going to college become a reality; 2. (Search) What colleges did the students consider? How did students research the colleges; and 3. (Choice) What were the deciding elements (e.g., institution characteristics, career outlook, tuition costs, financial aid, admissions process, advising centers, etc.) in enrolling at the technical college? This portion is organized by discussing specific findings about Washburn Tech students' methods and reasons for managing the three-stages in the college choice model. In answering the secondary questions, the study improves our understanding of the CTE student's college choice process, but it also establishes an important foundation for the study's main conclusion.

Predisposition findings. The study's survey asked how participants managed the predisposition stage of their college choice process. The predisposition stage, according to Cabrera and La Nasa (2000), is the period when a student develops occupational and educational aspirations with intentions to pursue a college education after completing high school. Base on the survey sample, there four predisposition findings to discuss.

First, the study found that CTE respondents had high demonstrated predisposition for college. Fifty-two of the fifty-eight respondents felt strongly by the eighth grade (on average) they would pursue college after high school. This mirrored prior research which found that students begin their college and occupational aspirations in the 8th-9th grades (Eckstrom,1985; Hossler et al., 1987; Hossler, Schmit, & Vesper, 1999; McDonough, 1997; Stage & Hossler, 1989).

Next, data analysis showed that overall the sample reported being academically qualified for college supporting the literature on early predisposition and secondary academic performance. Of the fifty-six responses eighty-four percent (n = 49) stated they had above a 3.0

GPA. In fact, the average GPA range was 3.5-3.9. Furthermore, the average ACT composite of the twenty-six respondents was 23. Completing the predisposition stage before entering high school enables students to not only maintain good academic performance but also to study college preparation curriculum, participate in extracurricular activities, and seek information about ways to finance college (Hossler, Schmit, & Vesper, 1999; McDonough, 1997).

Another predisposition finding showed the survey sample had a sustained social network of parents and friends (social capital) and a system of cultural attributes and mannerisms (cultural capital) which influenced both their college aspirations and their college decisions. The data revealed evidence that social and cultural capital played a role in participants' decision to attend Washburn Tech. With thirty (59%) out of fifty-one respondents stating that at least one parent had a college degree, most of the participants came from a family that believed a college education was possible. Furthermore, forty-four of fifty-three students (83%) stated family's encouragement was more than an important influence on deciding on a college. Students who associate with college educated people and live in a home where parents expect and encourage them to attend college will strongly view a college education an important life decision (Hossler et al., 1999; McDonough, 2003; Perna & Titus, 2005; Walpole, 2003).

Lastly, because twenty-eight (53%) of the fifty-two Washburn Tech participants stated they financially saved for college, it is possible based on prior literature the overall sample had parental encouragement to financially prepare to meet the costs of a college education. Literature states that a student's college savings stems from parental encouragement to pursue a college education (Cabrera et al., 2000). This is evident when parents initiate college savings plans and guide their children on acceptable college costs and financial plans (Flint, 1992, 1993).

Search findings. The survey explored the second stage of Hossler and Gallagher's (1987) model by asking participants to describe the factors and methods used in researching post-secondary institutions. The survey results support prior college search process research (Cabrera et al., 2000; Galotti & Mark, 1994; Hossler et al., 1999; Hossler et al., 2004; Perna et al., 2005; Walpole, 2003). Data analysis revealed four distinctions about most participants' college search process.

The sample considered more colleges than just Washburn Tech. On average, participants contemplated attending 3.3 colleges. This was slightly less than Galotti and Mark's (1994) finding that college bound high school students on average consider nearly five institutions.

The study revealed that survey contributors consistently considered securing employment, reducing college costs, and studying programs the most important attributes when researching a college. Selected by fifty-one (96%) of fifty-six respondents, "Job placement after graduating" was the most important attribute in searching for a college. This was followed by "cost to attend" with fifty students (89%). With eighty-eight percent of the participants (n = 49), the third most important attribute selected was "faculty and course offerings." Rounding out the top five important attributes was "academic reputation" and "offered academic program(s)" with each being selected by forty-seven students (84%). In learning about Washburn Tech, seventy percent (n = 30) of forty-three participants identified their friends were instrumental. Fifty-six percent (n = 22) of thirty-nine respondents stated they learned about Washburn Tech their family members. With twenty-five (56%) of forty-five respondents learning about Washburn Tech through a teacher or counselor, findings showed that most participants came from a school that communicated that college attendance was important, and that Washburn Tech should be a viable option. The sample not only supports the prior research stating students learn about an

institution through their social and cultural capital (Hossler et al., 1999; McDonough, 2003; Perna & Titus, 2005; Walpole, 2003), but also from what McDonough (2003) described as "organizational habitus," referring to the impact an intermediate organization (e.g., school, church, club, etc.) has on an individual behavior.

Survey examination showed the sample overall did not rely on college-controlled recruitment methods during their search process. Besides "online search engines" which was identified by fifty-eight percent (n = 23) of forty respondents, only twelve (32%) of thirty-seven respondents, used "social media websites" (e.g., Facebook, Twitter, Instagram, etc.) and out of thirty-eight students "college fairs," a major element in an institution's recruitment strategy, was used by only ten respondents (26%).

Choice findings. This final portion shares analysis of participants' justification and confidence in specifically choosing Washburn Tech. In general, the study's findings supports prior college choice research which finds that location, availability of major, academic reputation, quality of faculty, and tuition are major factors in choosing a college (DesJardins, 2001; DesJardins et al., 2006; Hossler et al., 1987; Hossler et al, 2003; McDonough, 2003; Kim, 2004; Lillis & Tian, 2008; Perna, 2006, St. John, 2006). In addition, the survey results showed the sample relied more on academic elements than as presented in Chapter Four the social, cultural, and habitus influences.

Forty (80%) of the fifty students more than agreed that having their "desired academic program(s)" was the number one factor in choosing Washburn Tech. This was followed by Washburn Tech's "affordable tuition," "helpful staff," and "enjoyable visit." Survey data supports research that found college bound high school students based their college choice on more academic elements with less emphasis on social factors (Galotti and Mark, 1994).

In both the predisposition and search stages, social, cultural, and habitus elements were important influences, but when it came time to choose Washburn Tech thirty-one (62%) of fifty students either disagreed with or were indifferent to "teacher/guidance counselor advice." Furthermore, though friends played the most important role in learning about Washburn Tech, "my friends attending" was the least agreed upon factor used to selecting Washburn Tech, with only eight of forty-nine respondents agreeing. Galotti et al. (1994) found that decision criteria shifted during a student's college choice process. This appeared to be the case with the study's sample.

Major Conclusions

The survey findings satisfied the study's primary purpose to explore the ways Washburn Institute of Technology traditional aged students navigate the college choice process. The study's major conclusion is that the surveyed Washburn Tech traditional aged students followed the same college choice process as any other traditional aged post-secondary student. This distinction is despite the mixed reviews on CTE student's post-secondary motivations, abilities, and interests described in chapter two. This conclusion is supported by six findings.

1. CTE participants expressed being motivated by both career and academic gains, differing from prior opposite research;
2. The eighth grade was the average juncture at which CTE participants made the decision to pursue a college education, aligning with prior college choice research;
3. Most of the CTE participants receiving financial aid had income levels low enough to qualify for a Federal Pell Grant, supporting prior findings that technical institutions are appealing to low-income students;

4. The survey sample demonstrated both interest and resourcefulness in their pursuit of a technical education as represented in the number of respondents who took CTE courses and State of Kansas financial assistance while in high school;
5. Influences on the search and decision stages differ slightly, with job-placement and academic reputation playing important roles; and
6. CTE participants prepare both academically and financially for college. This contributes to the research that finds early decisions to attend college lead to college preparatory course selection and academic performance.

Limitations of the Study

Survey limitations were considered and managed when the study was conceptualized. However, despite best efforts, the study had some shortcomings that were largely outside the control of the researcher. This section presents two found limitations – restrictive dataset and student participation.

Restrictive Dataset

During the study's conception phase, distributing the survey to Washburn Tech's entire study body was considered. It was decided to reduce the target population to Washburn Tech students who completed their secondary education between 2013 and 2017. This smaller target population was selected because they were eligible for the state's technical tuition reimbursement program which began in 2012-13. Though the decision to reduce the number of targeted students proved to productively meet the study's needs, there were several trade-offs

Findings were mostly from white, male students. As previously discussed and justified earlier, the reduction of participant dataset from approximately 900 students to 300 limited the number of potential responses from Washburn Tech's less than 30% minority enrollees. National

research concludes technical institutions attract first-generation, low-income minority students. With a restrictive dataset, the study's sample was unable to be used to compare with national CTE student statistics.

The study's high number of nonresponses impacts the usefulness of some survey findings. For example, the survey sample aligned with the research from Laird et al. (2006) that technical institutions were appealing to low-income families. In addition, a unique finding appears when the study's sample doesn't support prior researchers' finding that most CTE students were first-generational. However, because the study's low response from specifically African-Americans and Hispanics, and considering these students are more likely to be low-income, first-generational college students (Cabrera et al., 2001; Perna, 2000; Sax et al., 2003), the survey cannot describe an accurate assessment.

Another trade-off to the narrow dataset was a limited description of Washburn Tech overall population. The study found student participation reflected the overall Washburn Tech population, and the purpose of the study was only to describe survey responses received. However, if a statistical significance was calculated, more participation would be required to improve standard deviation and confidence level. This will be addressed further in the study's future recommendations.

Student Participation

A communication plan to send survey invitations using student's Washburn Tech e-mail account was constructed and implemented. Despite a sound strategy to coordinate the timely release of messages, eliminating duplication and confusion, the means to either push or pull students to take the survey was limited. An incentive offering was considered to encourage students to participate, but because it could have diminished the study's human subject

credibility, a participant reward program was not used. Without an incentive to participate, responses received were from students who were not seeking reciprocity. Groves et al. (1992) summarized prior literature to explain this reciprocity as the principle that "one should be more willing to comply with a request to the extent that the compliance constitutes the repayment of a perceived gift, favor, or concession" (p. 480). The researchers go further by asserting the probability that this reciprocity principle underlies the large literature which found consistent positive effects of incentives (e.g., cash payments, gifts, etc.) on survey cooperation. Furthermore, without a reason to participation, nonresponding students eventually began to ask that they stop receiving survey invitations. Later in this chapter, recommendations are made to improve student participation.

Implications of the Study

This study has several implications for helping students decide to attend a Kansas technical institution like Washburn University Institute of Technology. The following focuses on how findings impact two prominent stakeholders in the technical college choice process – CTE students and Washburn Tech.

Impacts on College and Technical Education Students

A major reason for conducting the study was to provide findings that would assist future students in making a significant life decision: choosing a post-secondary institution. The study data benefits future CTE students. This portion presents two recommendations that will assist future CTE students in making their college choice. It begins by return to the study's major conclusion that the sample on average decided to pursue college prior to high school. This is beneficial for future learners because the sample's early decision illustrated the potential to use one's full secondary education to prepare for college, improving the college admissions

opportunities. When this is accompanied by supporting research, prospective CTE students will understand the benefits of college savings as they make the transition into postsecondary.

Benefits of early predisposition. Even despite research presenting negative views of CTE student academic readiness, this study found that most participants self-reported academic success prior to Washburn Tech. With participants usually making their college decisions in 8th grade, this study's findings aligned with research stating that students who make early decisions to go to college are more likely to take college pathways while in high school, taking preparatory courses and focusing on academic performance. Students should be encouraged to decide to attend college before starting their secondary education. This will help secondary teachers and counselors guide students on an appropriate college academic pathway. By preparing academically for post-secondary education, research suggests, students at two-year or four-year institutions are not only likely to continue their academic success but are also more equipped to finish their college program.

Financial planning. With college costs rising, it is reassuring that most survey participants stated they had saved money for college, considering a large portion of participants who received financial aid were eligible for a low-income Federal Pell Grant. Previous research reveals that student financial preparation not only has positive effects on college performance, but it also correlates with an encouraging family environment. Students planning to go to college should enroll in personal finance classes as early as possible when preparing for college. In addition, students should discuss with a parent/guardian their shared plan to cover college expenses, working with the appropriate official (e.g., teacher, counselor, college representative, etc.) to determine the cost to attend an institution. This may require both students and their

parents to attend financial aid workshops and other supportive personal finance courses. Even a just small college savings will support a student's decision selecting a post-secondary institution.

Impacts on Washburn Institute of Technology – Student Recruitment

As mentioned in chapter one, Washburn Tech became a valid post-secondary option in 2008 when it joined Washburn University. This required Washburn Tech to revisit its enrollment plans for they were no longer focusing on primarily serving secondary students from Topeka Public Schools. Results from the survey impact Washburn Tech's student recruitment efforts. Specifically, there are three examples demonstrating how the study's findings impact Washburn Tech's newly revised student recruitment efforts.

Recruit more eigth grade students. As described in chapter four, the sample of Washburn Tech traditional aged students decided on average to go to college by the eighth grade. According to Hossler and Gallagher (1987), this age of predisposition is typical for traditional students. Based on these findings, Washburn Tech should improve partnerships with a prospect's organizational habitus (e.g., schools, community centers, etc.), especially during 7th-8th grade, to assist traditional student in making an early decision to pursue a college education.

Adopt a timely, responsive plan, allowing students to drive the timeline and information. According to Ruffalo Noel Levitz (2017), institutions like Washburn Tech need to provide prospective students an original, personal experience, delivering relevant and timely information based on how students discover and explore colleges in their own fashion. For example, examination of survey responses showed that college preferences shifted between the seach and choice stages. As described in chapter four, during a participant's search stage, job placement and cost to attend are very important. In contrast, the top five important reasons sample students chose Washburn Tech was academic programs, affordable tuition, helpful staff,

an enjoyable campus visit, and knowledgeable faculty. To properly maximize their reach and meet prospective students' needs, Washburn Tech should see if their recruitment plan meets the shift in student college preference between the search and choice stages.

Recognize the importance of social and cultural capital influences. The study found that helping a student choose a college doesn't rest solely on the institution's recruitment plans. Family encouragement ranked above important in the college choice process. When analyzing how participants learned about Washburn Tech, familial and environmental elements were important college discovery sources. The survey found that participants used friends, online searches, family members, and teacher/guidance counselors to learn about Washburn Tech, and unlike their search and decision importance, Washburn Tech efforts through social media sites (e.g., Facebook, Instagram, Twitter, etc.) and college fairs were heavily identified as not a method used to learn about the institution. These findings illustrate the importance that Washburn Tech's recruitment plan involves respecting a prospect's social and cultural environment.

Recommendation for Further Research

The purpose of this descriptive study was to create a quality picture of Washburn Tech students' college choice process that would begin answering additional questions. Two opportunities for further research are presented in this section. There is a need for a deeper inquiry into the college choice process of other Washburn Tech and Kansas CTE students. Also, a qualitative study of survey participants is necessary to add a voice to the findings.

Studying Additional Washburn Tech and Kansas CTE Students

Over 14,000 students enrolled in Kansas technical institutions in the Fall 2017 (KBOR, 2018) a positive change of thirty-four percent since 2012 (N = 10,478). Though the study's

population does reflect the majority of CTE students at Washburn Tech and in Kansas, but it only represents twenty-five percent of Washburn Tech's traditional aged students. There is an opportunity to learn from not only the 600 plus additional Washburn Tech students, but also the thousands of other CTE students enrolled at other six Kansas technical institutions. There are still many interesting questions that could be explored. For example:

- Did current Washburn Tech students who completed their secondary education before 2013 approach their college decision differently than the study's population? – As explained, the study focused on students who graduated high school between 2013 and 2017. Using the study's research question, there is an opportunity to explore the college-choice process of excluded current Washburn Tech students. This would provide a comparative and descriptive sample of students who would be mostly non-traditional students who are 25 years or older. Considering that most Washburn Tech programs are completed within two years, this inquiry would potentially result in unique findings in specific reasons for delaying the college choice after completing their secondary education.
- How do CTE students from rural hometowns approach the college-choice process? - Five of the seven Kansas technical institutions are in cities with 60,000 or fewer in population, with two having fewer than 4,500 citizens. CTE students who attend these institutions will come from rural hometowns, where college choices would be more restricted. It would be interesting to discover if CTE students from different geographic regions and limited post-secondary options approach their college choice differently than the Washburn Tech participants in this study.

- Do Kansas minority CTE students differ in their college choice process? - Most of the study's respondents were white, male students. Considering the national data demonstrating that technical institutions are an attractive post-secondary choice for minority students, there is an opening to study in not only the ways Kansas minority CTE students approach the college choice process, but also the interesting question of why Kansas technical student populations might differ from the national research.

Qualitative Exploration of Study Participants

Findings from the study established a baseline description of the college choice process for a specific group of CTE students. To further understand their college choice process, there is an opening for an interpretive, qualitative study of the participants. Merriam (2002) states the purpose of a basic interpretive, qualitative study is to allow the research to explore "how a participant makes meaning of a situation or phenomenon" (p. 6). The method provides descriptive outcomes by collecting data from interviews and observations. Data is analyzed through logical inductions, identifying any patterns or themes. Using the themes identified by this study, a deeper analysis from a qualitative exploration will, according to Maxwell (1996), lead to improved practices and understanding in serving CTE students through their college choice process.

Conclusion

This descriptive college choice study successfully fits a small piece in the large puzzle of understanding the CTE student's college choice process. Because there is a strong need for CTE student research, it is reassuring that the study's sample both mirrored prior literature and provided a baseline for future research. Respondents decided early, prepared academically, identified preferences, and weighed criteria to choose Washburn Institute of Technology. In addition, the sample appeared motivated, interested, resourced, and supported to improve both academically and occupationally. Data analysis reveals several beneficial implications. Study's conclusions aid prospective students in making their college choice, Washburn Tech in meeting stakeholders' expectations, and future researchers in further understanding the CTE student's post-secondary decision journey.

I realize, having five years working in the Career and Technical Education area of the Kansas State Department of Education, the value and importance a growing technical skilled workforce has on Kansas's economy. As business and industry demand more technical skilled employees, Kansas technical institutions will face greater pressure to produce graduates who have the practical skills to satisfy market demands. I am optimistic that from my research more students will recognize that choosing a technical institution is like selecting any other college or university, full of opportunities and resources. Additionally, I hope my discoveries will inspire parents, faculty, administrators, and community members to consider the significance of a technical education when supporting a student's college choice.

As a former director of admissions of Washburn University charged with recruiting and admitting new students, I understand first-hand the challenges and pressures postsecondary institutions face with serving new students and growing enrollment. In an environment of

dwindling post-secondary financial support and increasing college options, Washburn Tech faces significant enrollment challenges. I believe this study advances Washburn Tech's efforts to adopt a timely, responsive retention plan, placing in the foreground their students' needs and expectations.

Finally, it is my desire that this research will light a torch, guiding future explorers in unearthing new college choice discoveries, assisting a student demystify their complex and overwhelming post-secondary decision. A student's post-secondary choice is essential in securing their future and quality of life. Though this research ends my exploration, it is still only the beginning in understanding the CTE student's college choice process.

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APPENDIX A - CONCEPT MAP

The intent of this study is to explore factors that influence CTE students' choice to attend a technical college. On the next page, a two-level illustration of the study's conceptual map is provided. A concept map is a graphic tool used to organize and represent knowledge of a subject. Beginning with the primary purpose, the diagram branches out to show four specific, supportive topics: 1. Career Technical Education (CTE) Students; 2. Research on post-secondary vocational education (VE) in the United States and Kansas; 3. College choice theory; and 4. Influences on college choice. All four are interconnected, each having a degree of relevancy with the others. The supportive topics are the basis of the literature review. There are several key words that are relevant and important to the topic:

Attainment/Completion	Post-graduation Outlook
Career and Technical Education (CTE)	Retention
College choice theory	Senate Bill 155
Continuance	Social Capital
CTE Student types	Stakeholders
Cultural Capital	Sub baccalaureate
Economic impact	Topeka
Hossler and Gallagher	Vocational education
Kansas	Washburn Institute of Technology
Occupations	Washburn University

APPENDIX B - COLLEGE CHOICE SURVEY

Please answer the following questions to the best of your ability. If a question does not contain a precise answer that describes you, please choose the closest response available.

Thank you for participating in this survey. It should only take approximately ten minutes to complete.

1. Before completing my high school diploma or GED, I considered the following options:

	Yes	No
Joining the military		
Entering the workforce.		
Attending college		

2. I decided to go to college at this age: (Enter your age) [ ]

3. I wanted to go to college because:

	Strongly Disagree	Disagree	Somewhat Disagree	Somewhat Agree	Agree	Strongly Agree
It was expected of me.						
I was good at school.						
My family pressured me to go to college.						
I needed to go to college to get the job I wanted.						
I was encouraged to go to college.						
I thought it would be a way to make more money.						
I had nothing else to do.						
My friends were going						
Other						

4. Did you earn a high school diploma or General Education Development (GED) certificate?

   ❍ High school diploma
   ❍ GED

5. I saved money to attend college.
   ❍ Yes
   ❍ No

Display This Question:

If Did you earn a high school diploma or General Education Development (GED) certificate? High school diploma Is Selected

6. In what year did you earn your high school diploma? (YYYY) [ ]

Display This Question:

If Did you earn a high school diploma or General Education Development (GED) certificate? High school diploma Is Selected

7. What was your approximate cumulative (overall) high school GPA?
   - ❍ 4.0
   - ❍ 3.5-3.9
   - ❍ 3.0-3.4
   - ❍ 2.5-2.9
   - ❍ Below 2.5
   - ❍ Don't know

Display This Question:

If Did you earn a high school diploma or General Education Development (GED) certificate? GED Is Selected

8. In what year did you complete your GED? (YYYY) [ ]

9. Did you take any technical college courses before you completed your high school diploma or GED?
   - ❍ Yes
   - ❍ No

Display This Question:

If Did you take any technical college courses before you completed your high school diploma or GED? Yes, Is Selected

And In what year did you complete your high school diploma? (YYYY) Text Response Is Greater Than or Equal to 2013

Or In what year did you complete your GED? (YYYY) Text Response Is Greater Than or Equal to 2013

10. Did the State of Kansas pay for any of the technical college courses you took before completing your high school diploma or GED?
    - ❍ Yes
    - ❍ No
    - ❍ I don't know

11. How many colleges did you apply to besides Washburn Tech? [ ]

Display This Question:

If How many colleges did you apply to besides Washburn Tech? [] Text Response Is Greater Than or Equal to 1

12. Where did you apply, and did you get accepted (Yes or No)?

Institution(s)	Yes	No

13. While you were looking at other colleges, did you:

	Yes	No
Tour school facilities?		
Sit in on a class?		
Talk with current student(s) in the program?		
Visit with instructor(s) in the program?		
Speak with an Admissions/Financial Aid Counselor?		
Talk with a graduate of the program?		

14. To what extent did you consider the following characteristics when researching colleges?

	Very Important	Important	Somewhat Important	Unimportant
percentage of students who graduate?				
job placement after graduating?				
cost to attend the institution?				
ease of admissions policy and process?				
academic reputation?				
financial aid assistance?				
faculty and course offerings?				

15. I decided to attend Washburn Tech because:

	Strongly Disagree	Disagree	Somewhat Disagree	Somewhat Agree	Agree	Strongly Agree
I would be accepted by other students.						
I could afford the tuition.						
class sizes were ideal.						
I enjoyed my campus visit.						
I wanted to join my friend(s).						
faculty is knowledgeable.						
staff was helpful.						
a teacher/guidance counselor advised me to attend.						
desired academic program.						
I was persuaded by Washburn Tech's marketing (e.g., commercials; publications; billboards; etc.).						
Other:						

16. I'm currently pursuing an academic program in:

Advanced Systems Technology		Health Care Technology	
Auto Collision Repair		Heavy Diesel Construction Technology	
Auto Service Technology		Legal Office Professional	
Building Technology		Machine Tool Technology	
Business Bookkeeping and Accounting		Medical Office Specialist	
Cabinet and Millwork		Office Careers Technology	
Climate and Energy Control Technologies		Practical Nursing	
Commercial and Heavy Construction		Surgical Technology	
Computer Repair and Networking		Technical Drafting	
Culinary Arts		Welding	
Electrical Technology		Undecided	
Graphics Technology		Other:	

17. I am attending Washburn Tech:
- ❍ Full-time
- ❍ Part-time

18. What placement exam did you take to be admitted into your program at Washburn Tech?
- ❍ ACT
- ❍ ACT WorkKeys
- ❍ ACCUPLACER
- ❍ Compass
- ❍ Not listed
- ❍ Don't know

Display This Question:

If Q25 What placement exam did you take to be admitted into your program at Washburn Tech? ACT Is Selected

19. Enter your ACT scores. (Leave blank if unknown.)

Overall Composite	

Display This Question:

If Q25 What placement exam did you take to be admitted into your program at Washburn Tech? ACT WorkKeys Is Selected

20. Enter your ACT WorkKeys scores. (Leave blank if unknown.)

English	
Math	

Display This Question:

If Q25 What placement exam did you take to be admitted into your program at Washburn Tech? ACCUPLACER Is Selected

21. Enter your ACCUPLACER scores. (Leave blank if unknown.)

English	
Math	

Display This Question:

If Q25 What placement exam did you take to be admitted into your program at Washburn Tech? Compass Is Selected

22. Enter your Compass scores. (Leave blank if unknown.)

English	
Math	

23. Are you Pell Grant Eligible?
- ❍ Yes
- ❍ No

24. Given my experience:

	Strongly Disagree	Disagree	Somewhat Disagree	Somewhat Agree	Agree	Strongly Agree
I am satisfied with my decision to attend Washburn Tech.						
If I was to do it over, I would choose to attend Washburn Tech.						
I will successfully complete my program.						

25. Did either of your parents earn a college degree?
- ❍ Yes
- ❍ No

26. To which gender identity do you most identify?
- ❍ Female
- ❍ Male

27. What year were you born? (YYYY) [ ]

28. Ethnicity origin (or Race): Please specify your race/ethnicity. (Check all the apply)
- ❍ Asian/Pacific Islander
- ❍ Black or African American
- ❍ Hispanic or Latino
- ❍ Native American or American Indian
- ❍ White
- ❍ Other

29. What is your status of employment?
- ❍ Part-time
- ❍ Full-time
- ❍ Unemployed

30. Which marital status do you most identify with?
- ❍ Single
- ❍ Married

31. Do you have any children?
- ❍ Yes
- ❍ No

Display This Question:

If Do you have any children? Yes, Is Selected

32. How many children do you have? [ ]

Thank you for your time and answers.